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CALIFORNIA MINES AND MINERALS

BULLETIN No. 35.

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CALIFORNIA STATE MINING BUREAU . .

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State Mineralogist

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CALIFORNIA MINES AND MINERALS

Compiled by CHAS. G. YALE, Statistician State Mining Bureau.

THE mining interests of the State of California are so diversified, and the industry is extended over so wide an area, that it is difficult to describe the conditions which exist without using many pages of printed matter. For this reason it has been considered proper, in this pamphlet, to give merely a record of results, which will show in plain figures what is being accomplished by the miners of the State. This record shows that some forty-four mineral substances are being exploited, the annual valuation of which is now $37,759,040 and increasing at the rate of about $2,500,000 yearly, as capital is invested and more mines are opened. The older mines, too, having been well developed and equipped, are increasing their annual output, and thus also proving their permanency and value with depth.

The climatic conditions are favorable to mining operations throughout the State, and means of transportation have been so improved as to greatly lessen costs of supplies, etc. There are abundant opportunities for the safe and profitable investment of capital in the various branches of the industry, as numerous claims which have been located have never been properly developed or equipped, their owners lacking the necessary means.

The State Mining Bureau, maintained by State aid, provides numerous publications in the form of Bulletins or Reports, giving in detail the conditions existing in gold, copper, quicksilver, and all the various branches of mining. It also publishes maps of the counties which show the location of all mines, roads, streams, etc. The Bureau is in charge of a State Mineralogist, who has a corps of trained Field Assistants, and an office force as well. There is a fine technical library, and a very large museum showing specimens of all mineral products, suitably arranged for reference. There is also a well-equipped laboratory for the determination, etc., of minerals, making assays, analyses, etc.

The Bureau publishes annually, among other things, a Statistical Bulletin showing by counties the output and value of all substances mined or quarried in California. From the latest bulletin of this character, covering the calendar year 1903, the figures and tables given in this pamphlet are taken, in the belief that they will give, perhaps, the best idea of what the mines of the State are producing and what the miners are accomplishing.

TOTAL MINERAL PRODUCT OF CALIFORNIA FOR 1903.

The following table shows the yield and value of mineral substances of California for 1903, as per returns received at the State Mining Bureau, San Francisco, in answer to inquiries sent to producers:

	Quantity.	Value.		Quantity.	Value.
Asphalt	41,670 tons	$503,659	Marble	84,624 cu. ft.	$97,354
Bituminous Rock	21,944 "	53,106	Mica	50 tons	3,800
Borax (Crude)	34,430 "	661,400	Mineral Paint	2,370 "	3,720
Cement	640,868 bbls.	968,727	Mineral Water	1,978,340 gals.	558,201
Chrome	150 tons	2,250	Natural Gas	120,134 M cu. ft.	75,237
Chrysoprase	-------	500	Paving Blocks	4,854 M	134,642
Clays: For Pottery	90,972 tons	99,907	Petroleum	24,340,839 bbls.	7,313,271
For Brick	214,403 M	1,999,546	Platinum	-------	1,052
Coal	93,026 tons	265,383	Pyrites	24,311 tons	94,000
Copper	19,113,861 lbs.	2,520,997	Quartz Crystals	-------	1,968
Fuller's Earth	250 tons	4,750	Quicksilver	32,094 flasks	1,335,954
Glass Sand	7,725 "	7,525	Rubble	1,610,440 tons	1,237,419
Gold	-------	16,471,264	Salt	102,895 "	211,365
Granite	408,625 cu. ft.	678,670	Sandstone	353,002 cu. ft.	585,309
Gypsum	6,914 tons	46,441	Serpentine	99 " "	800
Infusorial Earth	2,703 "	16,015	Silver	-------	517,444
Lead	110,000 lbs.	3,960	Slate	10,000 squares	70,000
Lime	496,587 bbls.	418,280	Soapstone	219 tons	10,124
Limestone	125,919 tons	163,988	Soda	18,000 "	27,000
Lithia Mica	700 "	27,300	Tourmaline	-------	100,000
Macadam	605,185 "	436,172	Turquoise	-------	10,000
Manganese	1 "	25			
Magnesite	1,361 "	20,515	Total value		$37,759,040

In the previous year, the total product was valued at $35,069,105, so that the increase for 1903 is $2,689,935.

The total value of the metallic substances (including precious metals) for 1903 was $20,856,666, which includes gold, silver, mineral paint, quicksilver, copper, lead, manganese, platinum, and chrome. The silver is given in commercial value, or amount received for it by producers; if given in coining value, the sum would be about doubled.

The total value of non-metallic substances was $2,048,638. These substances include borax, coal, chrysoprase, mineral waters, salt, infusorial earth, gypsum, magnesite, pyrites, lithia mica, Fuller's earth, quartz crystals, mica, soda, tourmaline, and turquoise.

The total value of hydrocarbons and gases was $7,945,273, an increase of $2,760,886. The hydrocarbons and gases include asphalt, bituminous rock, natural gas, and petroleum. The gas is given in value of that commercially utilized. The petroleum price is the average per barrel f. o. b. at wells or stations in each county. The number of barrels of oil produced was 24,340,839, valued at $7,313,271, as against 14,356,910 barrels in 1902, valued at $4,692,189.

The total value of structural materials was $6,908,463, an increase of $2,799,440 over the previous year. These materials include brick and pottery clays, Portland cement, lime and limestone, macadam, rubble and concrete rock, paving blocks, marble, granite, sandstone, serpentine, slate, glass sand, and soapstone.

The relative value of the principal mineral products of the State is as follows: 1st, Gold; 2d, Petroleum; 3d, Copper; 4th, Clays and their products; 5th, Quicksilver; 6th, Rubble; 7th, Cement.

The relative rank of the counties of the State, in point of mineral production, is given in the following table. In each case the value given includes that of all the mineral substances combined produced in the respective counties for the year. Some counties produce, in addition to gold and silver, five, six, or seven other substances; while other counties which yield little or no gold or silver, produce, in large quantities, quicksilver, mineral oils, copper, lead, asphalt, structural materials, etc. The figures include the aggregate value of all mineral products, including precious metals. These latter are based upon United States Mint returns for the year. The term "unapportioned" includes the total value of such substances as are grouped to avoid disclosing private business, as in the case of

single operations in a single county. In the large and complete table published in Bulletin No. 33 by the State Mining Bureau, from which these figures are taken, the amounts and values of all substances in the respective counties are set forth. It is therefore necessary in some cases to place the figures in the "unapportioned" column.

RELATIVE RANK OF COUNTIES IN TOTAL MINERAL PRODUCT IN 1903.

1.	Kern	$4,957,602	20. Mariposa	$552,516	39. Inyo	$139,563
2.	Shasta	3,201,680	21. Alameda	530,207	40. Yuba	125,871
3.	Los Angeles	2,549,128	22. Sacramento	506,796	41. Lassen	92,305
4.	Nevada	2,466,044	23. Madera	489,525	42. Stanislaus	70,605
5.	Calaveras	2,270,668	24. Riverside	446,449	43. Contra Costa	62,500
6.	Tuolumne	1,791,056	25. Plumas	424,894	44. Monterey	51,436
7.	Amador	1,639,819	26. Colusa	420,468	45. Humboldt	49,316
8.	Butte	1,581,325	27. Solano	404,614	46. San Joaquin	44,489
9.	San Bernardino	1,516,618	28. Santa Barbara	384,688	47. Tulare	41,175
10.	Orange	1,029,435	29. San Benito	367,851	48. Kings	24,200
11.	Napa	896,848	30. Mono	360,024	49. Mendocino	20,580
12.	Fresno	848,628	31. Sierra	311,246	50. Del Norte	7,183
13.	San Francisco	802,786	32. Lake	294,018	51. Tehama	7,000
14.	Placer	800,985	33. El Dorado	284,304	52. Alpine	2,847
15.	Ventura	714,766	34. San Luis Obispo	257,416	53. Yolo	144
16.	Santa Clara	670,159	35. Santa Cruz	254,247	54. Merced	780
17.	Siskiyou	663,598	36. San Mateo	252,500	Unapportioned	377,783
18.	San Diego	663,315	37. Marin	218,427		
19.	Trinity	621,244	38. Sonoma	195,369	Total	$37,759,040

While gold is still the leading mining product, its yield no longer puts the greatest gold-producing county in the first place. The petroleum of Kern County and the copper of Shasta give them precedence. Gold is more widely distributed than any other substance thus far mined in California; 34 counties out of the 57 in the State showing a gold yield in 1903, and it is known to exist in several others. The order in rank of the counties of the State, in the production of gold alone, is at present as follows:

COUNTY RANK IN GOLD PRODUCT IN 1903.

1. Nevada	$2,458,047	13. Plumas	$424,112	25. Fresno	$21,538
2. Calaveras	1,904,125	14. San Bernardino	381,197	26. Riverside	13,453
3. Tuolumne	1,732,572	15. Sacramento	335,646	27. Tulare	9,215
4. Amador	1,609,744	16. Mono	334,713	28. Monterey	8,920
5. Butte	1,571,507	17. Sierra	310,770	29. Los Angeles	8,674
6. Kern	1,022,353	18. El Dorado	277,304	30. Del Norte	7,183
7. Shasta	771,242	19. Yuba	125,830	31. Alpine	2,701
8. Siskiyou	613,576	20. Madera	93,070	32. San Luis Obispo	1,840
9. Trinity	607,728	21. Lassen	91,102	33. Ventura	1,087
10. Placer	570,571	22. Inyo	66,045	34. Orange	150
11. Mariposa	542,355	23. Stanislaus	52,869		
12. San Diego	461,516	24. Humboldt	38,509	Total	$16,471,264

TOTAL GOLD PRODUCT OF CALIFORNIA—1848-1903.

The following table shows the total gold yield of California, by years, from the time mining commenced in 1848 to 1903, inclusive:

1848	$245,301	1863	$23,501,736	1878	$18,839,141	1893	$12,422,811
1849	10,151,360	1864	24,071,423	1879	19,626,654	1894	13,923,281
1850	41,273,106	1865	17,930,858	1880	20,030,761	1895	15,334,317
1851	75,938,232	1866	17,123,867	1881	19,223,155	1896	17,181,562
1852	**81,294,700**	1867	18,265,452	1882	17,146,416	1897	15,871,401
1853	67,613,487	1868	17,555,867	1883	24,316,873	1898	15,906,478
1854	69,433,931	1869	18,229,044	1884	13,600,000	1899	15,336,031
1855	55,485,395	1870	17,458,133	1885	12,661,044	1900	15,863,355
1856	57,509,411	1871	17,477,885	1886	14,716,506	1901	16,989,044
1857	43,628,172	1872	15,482,194	1887	13,588,614	1902	16,910,320
1858	46,591,140	1873	15,019,210	1888	12,750,000	1903	16,471,264
1859	45,846,599	1874	17,264,836	1889	11,212,913		
1860	44,095,163	1875	16,876,009	1890	12,309,793	Total	$1,395,746,672
1861	41,884,995	1876	15,610,723	1891	12,728,869		
1862	38,854,668	1877	16,501,268	1892	12,571,900		

BANNER COUNTIES IN DIFFERENT MINERAL PRODUCTS—1903.

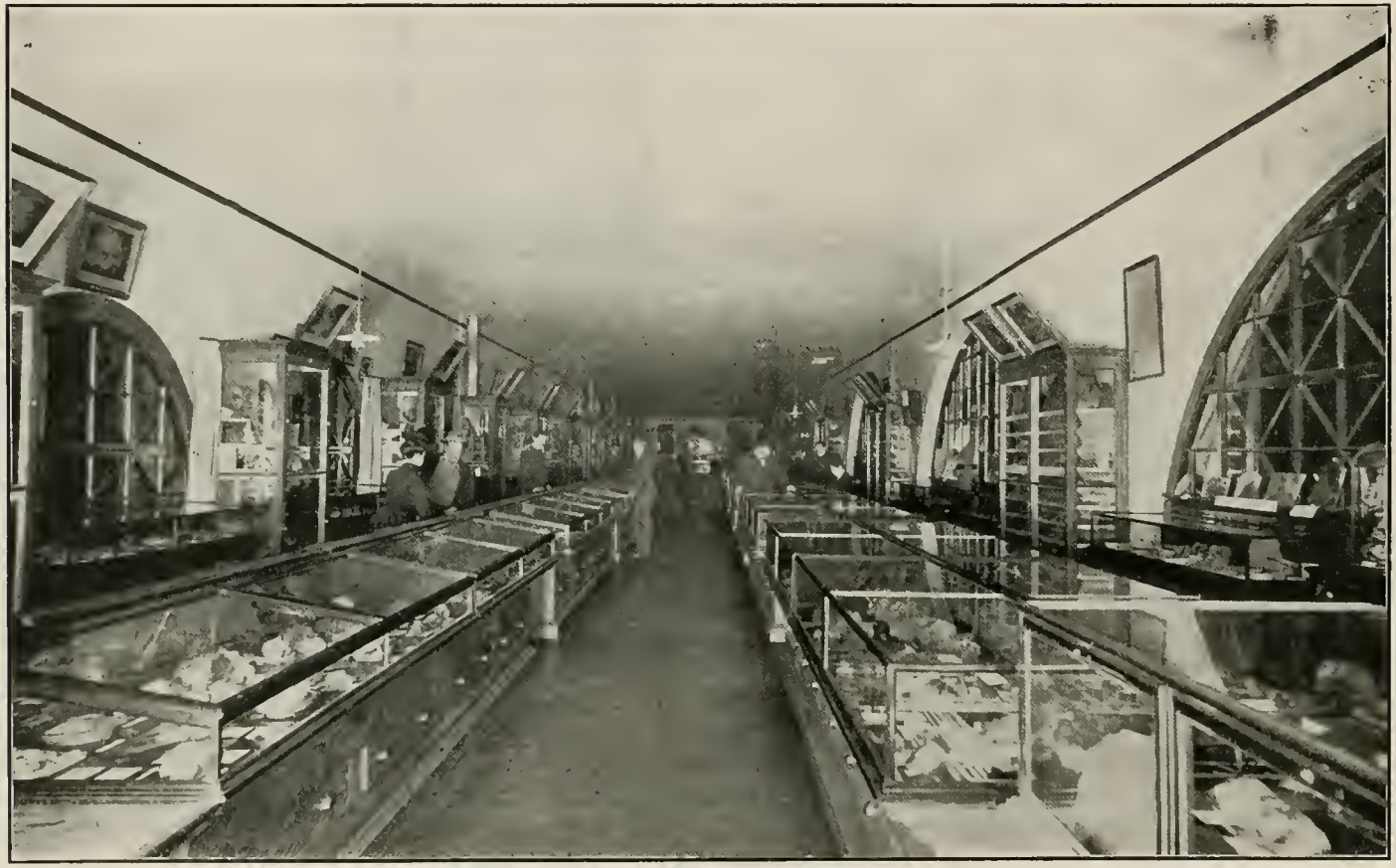
As far as the "banner" counties in the different mineral products are concerned, the following is the record for 1903, with the value of the material in which the county leads:

Alameda County leads in macadam ($193,498), pyrites ($88,500), and salt ($143,605); Colusa in sandstone ($312,500); Humboldt in platinum ($362); Inyo in lead ($3,420); Kern in Fuller's earth ($4,750) and petroleum ($3,600,230); Lake in mineral waters ($187,621); Los Angeles in asphalt ($332,600), brick ($706,334), gypsum ($38,441),

serpentine ($800), and soapstone ($10,124); Madera in granite ($389,800); Monterey in glass sand ($4,967); Napa in cement ($435,552); Nevada in gold ($2,458,047); Placer in quartz crystals ($1,968); Plumas in manganese ($25); Riverside in pottery clay ($65,332); San Benito in quicksilver ($344,251); San Bernardino in borax ($495,000), limestone ($64,613), marble ($41,600), and turquoise ($10,000); San Diego in lithia mica ($27,300) and tourmaline ($100,000); San Francisco in rubble ($473,010); San Joaquin in natural gas ($44,399); Santa Barbara in infusorial earth ($15,925); Santa Cruz in bituminous rock ($45,190) and lime ($185,442); Shasta in chrome ($2,250), copper ($2,171,497), and silver ($203,991); Sonoma in paving blocks ($80,492); Stanislaus in mineral paint ($2,400); Tulare in chrysoprase ($500) and magnesite ($19,600); Ventura in mica ($3,800).

It will be noted that one county leads in five substances—Los Angeles; two lead in four—Alameda and San Bernardino; one leads in three—Shasta; four lead in two—Kern, San Diego, Santa Cruz, and Tulare; and eighteen lead in one substance—Colusa, Humboldt, Inyo, Lake, Madera, Monterey, Napa, Nevada, Placer, Plumas, Riverside, San Benito, San Francisco, San Joaquin, Santa Barbara, Sonoma, Stanislaus, and Ventura.

To show the wide distribution of mineral substances in California, an analysis of the statistical table for 1903 published by the State Mining Bureau (Bulletin No. 33) proves that all of the 57 counties of the State except three made some mineral product in that year. Gold was mined in 34 counties and is known to exist in several others. Silver and brick clays were produced in 26 counties; rubble in 19; mineral waters in 18; macadam in 16; copper and lime in 15; granite in 13; limestone in 10; quicksilver in 9; asphalt in 8; petroleum and sandstone in 7; salt in 6; bituminous rock and marble in 5; cement, coal, pottery clay, paving blocks, and platinum in 4; borax, mineral paint, lead, and natural gas in 3; glass sand, gypsum, infusorial earth, magnesite, and pyrites in 2. The following substances were each produced in one county: Chrome, chrysoprase, Fuller's earth, lithia mica, mica, manganese, quartz crystals, slate, soapstone, serpentine, tourmaline, and turquoise. This statement relates only to mineral substances produced in 1903. There are, however, numerous places where these minerals are known, but where they are not at present being mined. In all there were 44 different mineral substances produced in California in 1903; but 75 different mineral substances are known to exist in the State, many of which are not yet utilized.



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QUANTITY AND VALUE OF MINERAL PRODUCTS OF CALIFORNIA—1903.

ASPHALT.	Quantity.	Value.
Fresno County	839 tons	$10,068
Kern County	8,006 "	100,787
Los Angeles County	28,308 "	332,600
Monterey County	61 "	732
Santa Barbara County	2,974 "	41,688
Santa Clara County	11 "	132
Ventura County	1,114 "	13,368
Unapportioned	357 "	4,284
Totals	41,670 "	$503,659

BITUMINOUS ROCK.		
Fresno County	17 tons	$38
Kern County	28 "	63
San Luis Obispo County	3,365 "	7,572
Santa Clara County	21 "	47
Santa Cruz County	18,426 "	45,190
Unapportioned	87 "	196
Totals	21,944 "	$53,106

BORAX (CRUDE).		
Inyo County	480 tons	$26,400
San Bernardino County	30,450 "	495,000
Ventura County	3,500 "	140,000
Totals	34,430 "	$661,400

CHROME.	Quantity.	Value.
Shasta County	150 tons	$2,250

CHRYSOPRASE.		
Tulare County	------	$500

CEMENT.		
Los Angeles County	500 bbls.	$1,175
Napa County	290,368 "	435,552
San Bernardino County	100,000 "	157,000
Solano County	250,000 "	375,000
Totals	640,868 "	$968,727

CLAYS—BRICK. (Includes Common, Pressed, and Fire.)		
Alameda County	10,300 M	$82,400
Butte County	1,200 "	7,200
Contra Costa County	2,600 "	16,000
Fresno County	8,000 "	68,000
Humboldt County	1,060 "	10,445
Kern County	9,000 "	30,000
Kings County	3,400 "	24,200
Los Angeles County	79,195 "	706,334
Madera County	216 "	972
Marin County	13,819 "	78,095
Mendocino County	550 "	5,580
Orange County	1,634 "	13,000

QUANTITY AND VALUE OF MINERAL PRODUCTS OF CALIFORNIA—1903.

CLAYS—BRICK—Continued.	QUANTITY.	VALUE.
Riverside County	$3,817 M	$164,020
Sacramento County	15,000 "	120,000
San Bernardino County	100 "	4,000
San Diego County	2,150 "	11,150
San Francisco County	33,403 "	294,326
San Luis Obispo County	750 "	6,000
San Mateo County	3,100 "	77,500
Santa Barbara County	4,900 "	46,200
Santa Clara County	28,069 "	188,284
Shasta County	3,500 "	17,500
Sonoma County	160 "	1,440
Tehama County	600 "	4,500
Tulare County	1,500 "	9,500
Ventura County	1,380 "	12,900
Totals	214,403 "	$1,999,546
CLAY—POTTERY.		
Amador County	22,000 tons	$19,460
Los Angeles County	115 "	115
Placer County	15,000 "	15,000
Riverside County	53,857 "	65,332
Totals	90,972 "	$99,907
COAL.		
Unapportioned	93,026 tons	$265,383

COPPER.	QUANTITY.	VALUE.
Amador County	10,000 lbs.	$900
Calaveras County	2,246,675 "	297,263
Inyo County	23,450 "	3,098
Kern County	4,300 "	559
Madera County	36,000 "	4,680
Mariposa County	61,627 "	6,808
Merced County	6,000 "	780
Mono County	1,600 "	208
Nevada County	4,500 "	585
Placer County	4,000 "	520
Plumas County	1,900 "	247
S. Bernardino County	60,400 "	7,852
Shasta County	16,453,409 "	2,171,497
Stanislaus County	116,000 "	15,080
Unapportioned	84,000 "	10,920
Totals	19,113,861 "	$2,520,997
FULLER'S EARTH.		
Kern County	250 tons	$4,750
GLASS SAND.		
Los Angeles	1,736 tons	$2,558
Monterey	5,989 "	4,967
Totals	7,725 "	$7,525

QUANTITY AND VALUE OF MINERAL PRODUCTS OF CALIFORNIA—1903.

GOLD.	VALUE.
Alpine County	$2,701
Amador County	1,609,744
Butte County	1,571,507
Calaveras County	1,904,125
Del Norte County	7,183
El Dorado County	277,304
Fresno County	21,538
Humboldt County	38,509
Inyo County	66,045
Kern County	1,022,353
Lassen County	91,102
Los Angeles County	8,674
Madera County	93,070
Mariposa County	542,355
Mono County	334,713
Monterey County	8,920
Nevada County	2,458,047
Orange County	150
Placer County	570,571
Plumas County	424,112
Riverside County	13,453
Sacramento County	335,646
San Bernardino County	381,197
San Diego County	461,516
San Luis Obispo County	1,840
Shasta County	771,242
Sierra County	$310,770
Siskiyou County	613,576
Stanislaus County	52,869
Trinity County	607,728
Tulare County	9,215
Tuolumne County	1,732,572
Ventura County	1,087
Yuba County	125,830
Total	$16,471,264

GRANITE.	QUANTITY.	VALUE.
Fresno County	4,000 cu. ft.	$11,000
Madera County	128,581 " "	389,800
Nevada County	2,170 " "	4,160
Placer County	108,078 " "	181,661
Riverside County	47,888 " "	48,975
Sacramento County	20,471 " "	2,222
San Diego County	53,200 " "	16,308
San Luis Obispo County	30,000 " "	8,000
Santa Cruz County	700 " "	140
Solano County	70 " "	49
Trinity County	100 " "	75
Tulare County	3,000 " "	2,260
Tuolumne County	10,367 " "	14,020
Totals	408,625 " "	$678,670

QUANTITY AND VALUE OF MINERAL PRODUCTS OF CALIFORNIA—1903.

GYPSUM.	Quantity.	Value.
Kern County	1,000 tons	$8,000
Los Angeles County	5,914 "	38,441
Totals	6,914 "	$46,441

INFUSORIAL EARTH.		
San Joaquin County	3 tons	$90
Santa Barbara County	2,700 "	15,925
Totals	2,703 "	$16,015

LEAD.		
Inyo County	95,000 lbs.	$3,420
Mono County	1,000 "	36
San Bernardino County	14,000 "	504
Totals	110,000 "	$3,960

LIME.		
Alameda County	10,000 bbls.	$15,000
Butte County	250 "	250
Contra Costa County	5,300 "	4,500
El Dorado County	5,600 "	7,000
Kern County	101,661 "	76,246
Mono County	1,818 "	5,000
Monterey County	26,000 "	23,400
Placer County	1,500 "	9,000

LIME—Continued.	Quantity.	Value.
San Bernardino County	39,923 bbls.	$28,692
San Luis Obispo County	100 "	100
Santa Barbara County	30,000 "	30,000
Santa Cruz County	220,835 "	185,442
Shasta County	27,000 "	10,800
Riverside County	25,000 "	21,250
Tuolumne County	1,600 "	1,600
Totals	496,587 "	$418,280

LIMESTONE.		
Butte County	190 tons	$250
Contra Costa County	18,000 "	22,500
Monterey County	6,516 "	9,000
Placer County	4,000 "	4,000
Riverside County	9,000 "	8,500
San Bernardino County	52,813 "	64,613
Santa Barbara County	20,000 "	40,000
Santa Clara County	7,000 "	7,000
Santa Cruz County	3,000 "	2,725
Shasta County	5,400 "	5,400
Totals	125,919 "	$163,988

LITHIA MICA.		
San Diego County	700 tons	$27,300

QUANTITY AND VALUE OF MINERAL PRODUCTS OF CALIFORNIA—1903.

MACADAM.	Quantity.	Value.
Alameda County	270,436 tons	$193,498
Los Angeles County	18,000 "	13,750
Madera County	4,000 "	1,000
Marin County	600 "	900
Monterey County	2,853 "	2,300
Placer County	3,000 "	3,750
Riverside County	11,080 "	22,160
Sacramento County	57,416 "	17,225
San Benito County	58,000 "	23,200
San Bernardino County	71,000 "	71,000
San Francisco County	35,900 "	35,450
Santa Cruz County	21,500 "	20,750
Shasta County	3,000 "	1,500
Solano County	26,300 "	17,725
Sonoma County	13,700 "	9,864
Ventura County	8,400 "	2,100
Totals	605,185 "	$436,172

MANGANESE.		
Plumas County	1 ton	$25

MAGNESITE.		
Napa County	61 tons	$915
Tulare County	1,300 "	19,600
Totals	1,361 "	$20,515

MARBLE.	Quantity.	Value.
Amador County	3,074 cu. ft.	$5,379
Inyo County	20,000 " "	20,000
Riverside County	12,000 " "	1,500
San Bernardino County	38,000 " "	41,600
Tuolumne County	11,550 " "	28,875
Totals	84,624 " "	$97,354

MICA.		
Ventura County	50 tons	$3,800

MINERAL PAINT.		
Calaveras County	200 tons	$1,000
Sonoma County	800 "	320
Stanislaus County	1,370 "	2,400
Totals	2,370 "	$3,720

MINERAL WATER.		
Butte County	13,000 gals.	$1,550
Colusa County	174,000 "	85,900
Contra Costa County	78,000 "	19,500
Fresno County	7,200 "	7,200
Lake County	381,040 "	187,621
Los Angeles County	95,000 "	5,500
Mendocino County	38,900 "	15,000

QUANTITY AND VALUE OF MINERAL PRODUCTS OF CALIFORNIA—1903.

MINERAL WATER—Continued.	Quantity.	Value.
Monterey County	55,000 gals.	$1,250
Napa County	244,400 "	124,000
San Benito County	10,000 "	400
San Diego County	6,000 "	3,000
Santa Barbara County	88,800 "	22,280
Santa Clara County	50,000 "	12,500
Shasta County	40,000 "	12,000
Siskiyou County	750,000 "	50,000
Solano County	10,000 "	4,000
Sonoma County	10,000 "	4,000
Tehama County	5,000 "	2,500
Totals	1,978,340 "	$558,201
NATURAL GAS.		
Sacramento County	31,680 M cu. ft.	$30,518
San Joaquin County	88,134 " " "	44,399
Santa Barbara County	320 " " "	320
Totals	120,134 " " "	$75,237
PAVING BLOCKS.		
Riverside County	600 M	$36,000
San Bernardino County	275 "	14,650
Solano County	100 "	3,500
Sonoma County	3,879 "	80,492
Totals	4,854 "	$134,642

PETROLEUM.	Quantity.	Value.
Fresno County	2,214,160 bbls.	$730,673
Kern County	18,001,148 "	3,600,230
Los Angeles County	1,960,604 "	1,294,866
Orange County	1,355,104 "	1,016,285
Santa Barbara Co.	262,226 "	149,640
Santa Clara County	4,695 "	3,966
Ventura County	542,902 "	517,611
Totals	24,340,839 "	$7,313,271
PLATINUM.		
Butte County		$210
Humboldt County		362
Placer County		280
Trinity County		200
Total		$1,052
PYRITES.		
Alameda County	21,811 tons	$88,500
Shasta County	2,500 "	5,500
Totals	24,311 "	$94,000
QUARTZ CRYSTALS.		
Placer County		$1,968

QUANTITY AND VALUE OF MINERAL PRODUCTS OF CALIFORNIA—1903.

QUICKSILVER.	Quantity.	Value.
Colusa County	510 flasks	$21,708
Lake County	2,595 "	106,397
Napa County	7,859 "	333,006
San Benito County	8,180 "	344,251
San Luis Obispo Co.	4,577 "	183,530
Santa Clara County	5,603 "	233,130
Sonoma County	2,404 "	98,676
Solano County	100 "	4,100
Trinity County	266 "	11,156
Totals	32,094 "	$1,335,954

RUBBLE.		
Alameda County	8,005 tons	$7,204
Los Angeles County	213,298 "	104,435
Marin County	144,115 "	139,432
Monterey County	1,445 "	867
Napa County	4,500 "	3,375
Placer County	27,967 "	13,119
Riverside County	40,165 "	45,123
Sacramento County	6,000 "	951
San Bernardino County	389,608 "	181,311
San Diego County	22,772 "	42,597
San Francisco County	458,010 "	473,010
San Luis Obispo Co.	31,188 "	47,583
San Mateo County	200,000 "	150,000
Santa Barbara County	1,590 "	4,395
Santa Clara County	100 tons	$100
Solano County	16,000 "	240
Sonoma County	577 "	577
Tulare County	100 "	100
Ventura County	45,000 "	23,000
Totals	1,610,440 "	$1,237,419

SALT.		
Alameda County	76,877 tons	$143,605
Colusa County	18 "	360
Inyo County	300 "	2,400
Los Angeles County	8,000 "	20,000
Riverside County	10,000 "	20,000
San Mateo County	7,700 "	25,000
Totals	102,895 "	$211,365

SANDSTONE.		
Colusa County	146,828 cu. ft.	$312,500
Los Angeles County	2,163 " "	9,734
San Luis Obispo Co.	6,977 " "	2,791
Santa Barbara County	82,654 " "	34,240
Santa Clara County	112,350 " "	225,000
Ventura County	1,750 " "	900
Yolo County	280 " "	144
Totals	353,002 " "	$585,309

QUANTITY AND VALUE OF MINERAL PRODUCTS OF CALIFORNIA—1903.

SERPENTINE.	QUANTITY.	VALUE.
Los Angeles County	99 cu. ft.	$800

SILVER.	COM. VALUE.
Alpine County	$146
Amador County	4,336
Butte County	358
Calaveras County	68,280
Fresno County	111
Inyo County	18,200
Kern County	114,614
Lassen County	1,203
Los Angeles County	22
Madera County	3
Mariposa County	3,353
Mono County	20,067
Nevada County	3,252
Placer County	1,116
Plumas County	510
Riverside County	136
Sacramento County	234
San Bernardino County	59,199
San Diego County	1,444
Shasta County	203,991
Sierra County	$476
Siskiyou County	22
Stanislaus County	256
Trinity County	2,085
Tuolumne County	13,989
Yuba County	41
Total	$517,444

SLATE.	QUANTITY.	VALUE.
Unapportioned	10,000 squares	$70,000

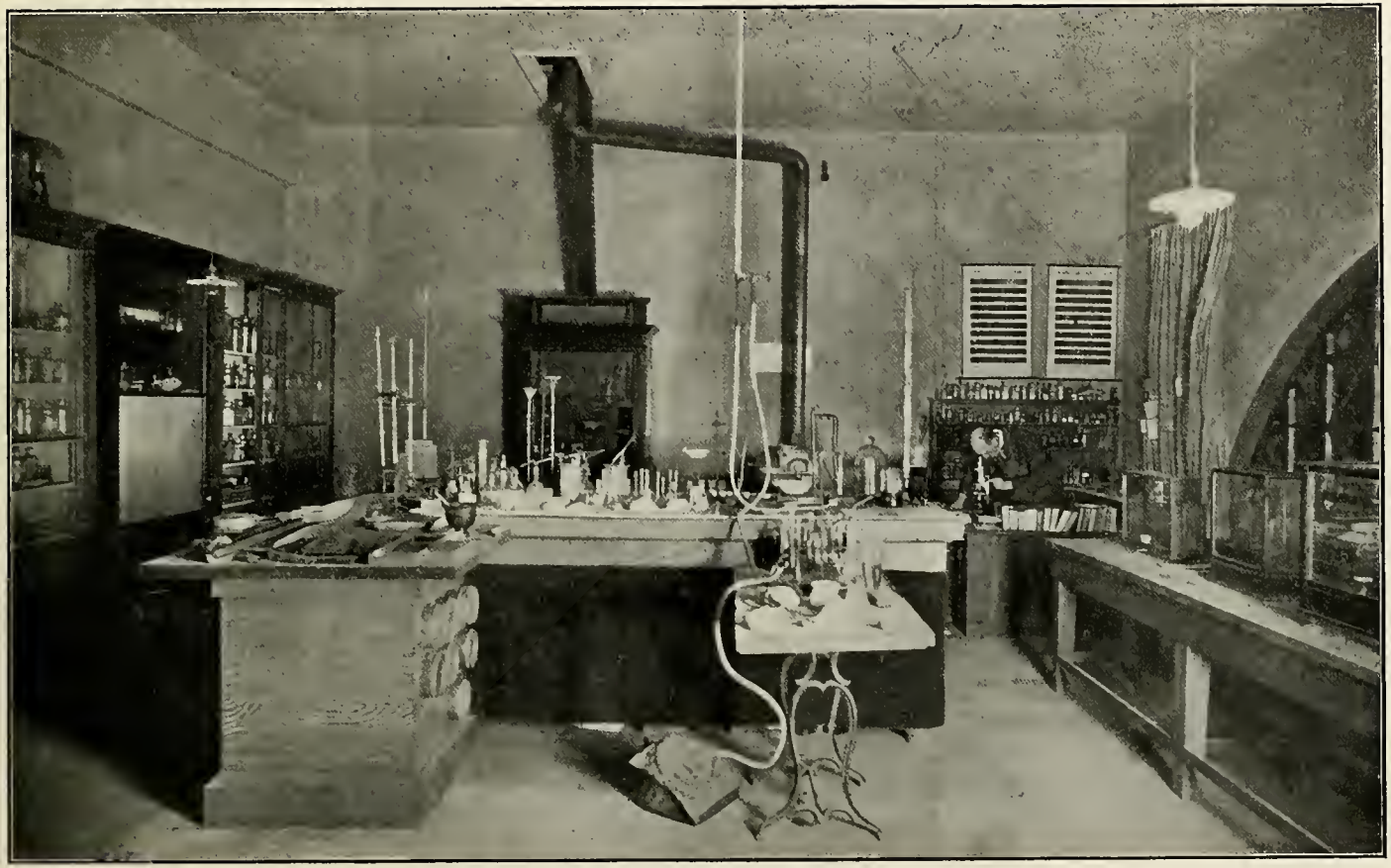
SOAPSTONE.		
Los Angeles County	219 tons	$10,124

SODA.		
Unapportioned	18,000 tons	$27,000

TOURMALINE.		
San Diego County	------	$100,000

TURQUOISE.		
San Bernardino County	------	$10,000

DRAUGHTING DEPARTMENT, CALIFORNIA STATE MINING BUREAU.



LABORATORY, CALIFORNIA STATE MINING BUREAU.

ASSESSED VALUATION, AREA, AND POPULATION OF CALIFORNIA.

	Assessed Valuation 1903.	Area, in Square Miles.	Population 1900.
Alameda County	$128,681,766	840	130,197
Alpine County	422,063	575	509
Amador County	4,918,908	568	11,116
Butte County	16,057,766	1,764	17,117
Calaveras County	6,177,275	990	11,200
Colusa County	12,188,096	1,080	7,364
Contra Costa County	21,753,956	750	18,046
Del Norte County	2,882,445	1,546	2,408
El Dorado County	4,668,840	1,891	8,986
Fresno County	34,302,205	5,940	37,862
Glenn County	10,645,524	1,400	5,150
Humboldt County	24,911,492	3,507	27,104
Inyo County	2,316,319	10,224	4,377
Kern County	24,050,871	8,159	16,480
Kings County	7,883,009	1,257	9,871
Lake County	3,258,020	1,332	6,017
Lassen County	4,590,748	4,750	4,511
Los Angeles County	169,268,166	3,957	170,298
Madera County	6,732,495	2,140	6,364
Marin County	14,489,582	516	15,702
Mariposa County	2,270,146	1,580	4,720
Mendocino County	13,131,995	3,460	20,465
Merced County	14,877,086	1,750	9,215
Modoc County	4,076,680	4,097	5,076
Mono County	1,151,109	2,796	2,167
Monterey County	18,962,554	3,450	19,380
Napa County	13,840,291	800	16,451
Nevada County	7,203,349	958	17,789
Orange County	13,812,566	780	19,696
Placer County	$9,677,724	1,484	15,786
Plumas County	2,792,091	2,361	4,657
Riverside County	16,373,296	7,008	17,897
Sacramento County	41,333,337	1,007	45,915
San Benito County	6,499,068	1,476	6,633
San Bernardino County	21,392,228	20,055	27,929
San Diego County	20,807,594	8,400	35,090
San Francisco County	564,070,301	42	342,782
San Joaquin County	34,740,535	1,370	35,452
San Luis Obispo County	13,680,235	3,500	16,637
San Mateo County	18,999,564	470	12,094
Santa Barbara County	18,849,976	2,450	18,934
Santa Clara County	61,390,817	1,355	60,216
Santa Cruz County	12,560,071	425	21,512
Shasta County	10,902,036	4,050	17,318
Sierra County	1,844,560	910	4,017
Siskiyou County	10,560,650	6,078	16,962
Solano County	20,195,481	911	24,143
Sonoma County	30,380,419	1,540	38,480
Stanislaus County	12,834,208	1,486	9,550
Sutter County	6,621,047	611	5,886
Tehama County	11,674,562	3,200	10,996
Trinity County	1,651,362	3,276	4,383
Tulare County	17,447,042	4,935	18,375
Tuolumne County	7,089,725	2,282	11,166
Ventura County	11,171,219	1,850	14,367
Yolo County	17,640,406	1,017	13,618
Yuba County	5,898,350	625	8,620
Totals	$1,598,603,226	156,931	1,485,053

COUNTY MINERAL PRODUCTS AND VALUE—1903.

ALAMEDA COUNTY.	Quantity.	Value.
Brick	10,300 M	$82,400
Lime	10,000 bbls.	15,000
Macadam	270,436 tons	193,498
Pyrites	21,811 tons	88,500
Rubble	8,005 tons	7,204
Salt	76,877 tons	143,605
		$530,207

ALPINE COUNTY.		
Gold	--------	$2,701
Silver	--------	146
		$2,847

AMADOR COUNTY.		
Clay	22,000 tons	$19,460
Copper	10,000 lbs.	900
Gold	----------	1,609,744
Marble	3,074 cu. ft.	5,379
Silver	----------	4,336
		$1,639,819

BUTTE COUNTY.	Quantity.	Value.
Brick	1,200 M	$7,200
Gold	----------	1,571,507
Lime	250 bbls.	250
Limestone	190 tons	250
Mineral Water	13,000 gals.	1,550
Platinum	----------	210
Silver	----------	358
		$1,581,325

CALAVERAS COUNTY.		
Copper	2,246,675 lbs.	$297,263
Gold	----------	1,904,125
Mineral Paint	200 tons	1,000
Silver	----------	68,280
		$2,270,668

COLUSA COUNTY.		
Mineral Water	174,000 gals.	$85,900
Quicksilver	510 flasks	21,708
Salt	18 tons	360
Sandstone	146,828 cu. ft.	312,500
		$420,468

COUNTY MINERAL PRODUCTS AND VALUE—1903.

CONTRA COSTA COUNTY.	Quantity.	Value.
Brick	2,600 M	$16,000
Lime	5,300 bbls.	4,500
Limestone	18,000 tons	22,500
Mineral Water	78,000 gals.	19,500
		$62,500

DEL NORTE COUNTY.		
Gold	----------	$7,183

EL DORADO COUNTY.		
Gold	----------	$277,304
Lime	5,600 bbls.	7,000
		$284,304

FRESNO COUNTY.		
Asphalt	839 tons	$10,068
Bituminous Rock	17 tons	38
Brick	8,000 M	68,000
Gold	----------	21,538
Granite	4,000 cu. ft.	11,000
Mineral Water	7,200 gals.	7,200
Petroleum	2,214,160 bbls.	730,673
Silver	----------	111
		$848,628

HUMBOLDT COUNTY.	Quantity.	Value.
Brick	1,060 M	$10,445
Gold	--------	38,509
Platinum	--------	362
		$49,316

INYO COUNTY.		
Borax	480 tons	$26,400
Copper	23,450 lbs.	3,098
Gold	----------	66,045
Lead	95,000 lbs.	3,420
Marble	20,000 cu. ft.	20,000
Salt	300 tons	2,400
Silver	----------	18,200
		$139,563

KERN COUNTY.		
Asphalt	8,006 tons	$100,787
Bituminous Rock	28 tons	63
Brick	9,000 M	30,000
Copper	4,300 lbs.	559
Fuller's Earth	250 tons	4,750
Gold	----------	1,022,353
Gypsum	1,000 tons	8,000
Lime	101,661 bbls.	76,246
Petroleum	18,001,148 bbls.	3,600,230
Silver	----------	114,614
		$4,957,602

COUNTY MINERAL PRODUCTS AND VALUE—1903.

KINGS COUNTY.	Quantity.	Value.
Brick	3,400 M	$24,200
LAKE COUNTY.		
Mineral Water	381,040 gals.	$187,621
Quicksilver	2,595 flasks	106,397
		$294,018
LOS ANGELES COUNTY.		
Asphalt	28,308 tons	$332,600
Brick	79,195 M	706,334
Cement	500 bbls.	1,175
Clay	115 tons	115
Glass Sand	1,736 tons	2,558
Gold	----------	8,674
Gypsum	5,914 tons	38,441
Macadam	18,000 tons	13,750
Mineral Water	95,000 gals.	5,500
Petroleum	1,960,604 bbls.	1,294,866
Rubble	213,298 tons	104,435
Salt	8,000 tons	20,000
Sandstone	2,163 cu. ft.	9,734
Serpentine	99 cu. ft.	800
Silver	----------	22
Soapstone	219 tons	10,124
		$2,549,128

LASSEN COUNTY.	Quantity.	Value.
Gold	--------	$91,102
Silver	--------	1,203
		$92,305
MADERA COUNTY.		
Brick	216 M.	$972
Copper	36,000 lbs.	4,680
Gold	----------	93,070
Granite	128,581 cu. ft.	389,800
Macadam	4,000 tons	1,000
Silver	----------	3
		$489,525
MARIN COUNTY.		
Brick	13,819 M.	$78,095
Macadam	600 tons	900
Rubble	144,115 tons	139,432
		$218,427
MARIPOSA COUNTY.		
Copper	61,627 lbs.	$6,808
Gold	--------	542,355
Silver	--------	3,353
		$552,516

COUNTY MINERAL PRODUCTS AND VALUE—1903.

MENDOCINO COUNTY.	Quantity.	Value.
Brick	550 M.	$5,580
Mineral Water	38,900 gals.	15,000
		$20,580
MERCED COUNTY.		
Copper	6,000 lbs.	$780
MONO COUNTY.		
Copper	1,600 lbs.	$208
Gold	----------	334,713
Lead	1,000 lbs.	36
Lime	1,818 bbls.	5,000
Silver	----------	20,067
		$360,024
MONTEREY COUNTY.		
Asphalt	61 tons	$732
Glass Sand	5,989 tons	4,967
Gold	----------	8,920
Lime	26,000 bbls.	23,400
Limestone	6,516 tons	9,000
Macadam	2,853 tons	2,300
Mineral Water	55,000 gals.	1,250
Rubble	1,445 tons	867
		$51,436

NAPA COUNTY.	Quantity.	Value.
Cement	290,368 bbls.	$435,552
Magnesite	61 tons	915
Mineral Water	244,400 gals.	124,000
Quicksilver	7,859 flasks	333,006
Rubble	4,500 tons	3,375
		$896,848
NEVADA COUNTY.		
Copper	4,500 lbs.	$585
Gold	----------	2,458,047
Granite	2,170 cu. ft.	4,160
Silver	----------	3,252
		$2,466,044
ORANGE COUNTY.		
Brick	1,634 M.	$13,000
Gold	----------	150
Petroleum	1,355,104 bbls.	1,016,285
		$1,029,435
PLUMAS COUNTY.		
Copper	1,900 lbs.	$247
Gold	----------	424,112
Manganese	1 ton	25
Silver	----------	510
		$424,894

COUNTY MINERAL PRODUCTS AND VALUE—1903.

PLACER COUNTY.	Quantity.	Value.
Clay	15,000 tons	$15,000
Copper	4,000 lbs.	520
Gold	----------	570,571
Granite	108,078 cu. ft.	181,661
Lime	1,500 bbls.	9,000
Limestone	4,000 tons	4,000
Macadam	3,000 tons	3,750
Platinum	----------	280
Quartz Crystals	----------	1,968
Rubble	27,967 tons	13,119
Silver	----------	1,116
		$800,985

RIVERSIDE COUNTY.		
Brick	3,817 M	$164,020
Clay	53,857 tons	65,332
Gold	----------	13,453
Granite	47,888 cu. ft.	48,975
Lime	25,000 bbls.	21,250
Limestone	9,000 tons	8,500
Macadam	11,080 tons	22,160
Marble	12,000 cu. ft.	1,500
Paving Blocks	600 M	36,000
Rubble	40,165 tons	45,123
Salt	10,000 tons	20,000
Silver	----------	136
		$446,449

SACRAMENTO COUNTY.	Quantity.	Value.
Brick	15,000 M	$120,000
Gold	----------	335,646
Granite	20,471 cu. ft.	2,222
Macadam	57,416 tons	17,225
Natural Gas	31,680 M cu. ft.	30,518
Rubble	6,000 tons	951
Silver	----------	234
		$506,796

SAN BENITO COUNTY.		
Macadam	58,000 tons	$23,200
Mineral Water	10,000 gals.	400
Quicksilver	8,180 flasks	344,251
		$367,851

SAN DIEGO COUNTY.		
Brick	2,150 M	$11,150
Gold	----------	461,516
Granite	53,200 cu. ft.	16,308
Lithia Mica	700 tons	27,300
Mineral Water	6,000 gals.	3,000
Rubble	22,772 tons	42,597
Silver	----------	1,444
Tourmaline	--------	100,000
		$663,315

COUNTY MINERAL PRODUCTS AND VALUE—1903.

SAN BERNARDINO COUNTY.	Quantity.	Value.
Borax	30,450 tons	$495,000
Brick	100 M	4,000
Cement	100,000 bbls.	157,000
Copper	60,400 lbs.	7,852
Gold	----------	381,197
Lead	14,000 lbs.	504
Lime	39,923 bbls.	28,692
Limestone	52,813 tons	64,613
Macadam	71,000 tons	71,000
Marble	38,000 cu. ft.	41,600
Paving Blocks	275 M	14,650
Rubble	389,608 tons	181,311
Silver	----------	59,199
Turquoise	----------	10,000
		$1,516,618

SAN FRANCISCO COUNTY.		
Brick	33,403 M	$294,326
Macadam	35,900 tons	35,450
Rubble	458,010 tons	473,010
		$802,786

SAN JOAQUIN COUNTY.		
Infusorial Earth	3 tons	$90
Natural Gas	88,134 M cu. ft.	44,399
		$44,489

SAN LUIS OBISPO COUNTY.	Quantity.	Value.
Bituminous Rock	3,365 tons	$7,572
Brick	750 M	6,000
Gold	----------	1,840
Granite	30,000 cu. ft.	8,000
Lime	100 bbls.	100
Quicksilver	4,577 flasks	183,530
Rubble	31,188 tons	47,583
Sandstone	6,977 cu. ft.	2,791
		$257,416

SANTA BARBARA COUNTY.		
Asphalt	2,974 tons	$41,688
Brick	4,900 M	46,200
Infusorial Earth	2,700 tons	15,925
Lime	30,000 bbls.	30,000
Limestone	20,000 tons	40,000
Mineral Water	88,800 gals.	22,280
Natural Gas	320 M cu. ft.	320
Petroleum	262,226 bbls.	149,640
Rubble	1,590 tons	4,395
Sandstone	82,654 cu. ft.	34,240
		$384,688

COUNTY MINERAL PRODUCTS AND VALUE—1903.

SAN MATEO COUNTY.	Quantity.	Value.
Brick	3,100 M	$77,500
Rubble	200,000 tons	150,000
Salt	7,700 tons	25,000
		$252,500

SANTA CLARA COUNTY.		
Asphalt	11 tons	$132
Bituminous Rock	21 tons	47
Brick	28,069 M	188,284
Limestone	7,000 tons	7,000
Mineral Water	50,000 gals.	12,500
Petroleum	4,695 bbls.	3,966
Quicksilver	5,603 flasks	233,130
Rubble	100 tons	100
Sandstone	112,350 cu. ft.	225,000
		$670,159

SANTA CRUZ COUNTY.		
Bituminous Rock	18,426 tons	$45,190
Granite	700 cu. ft.	140
Lime	220,835 bbls.	185,442
Limestone	3,000 tons	2,725
Macadam	21,500 tons	20,750
		$254,247

SHASTA COUNTY.	Quantity.	Value.
Brick	3,500 M	$17,500
Chrome	150 tons	2,250
Copper	16,453,409 lbs.	2,171,497
Gold	----------	771,242
Lime	27,000 bbls.	10,800
Limestone	5,400 tons	5,400
Macadam	3,000 tons	1,500
Mineral Water	40,000 gals.	12,000
Pyrites	2,500 tons	5,500
Silver	----------	203,991
		$3,201,680

SIERRA COUNTY.		
Gold	----------	$310,770
Silver	----------	476
		$311,246

SISKIYOU COUNTY.		
Gold	----------	$613,576
Mineral Water	750,000 gals.	50,000
Silver	----------	22
		$663,598

COUNTY MINERAL PRODUCTS AND VALUE—1903.

SOLANO COUNTY.	Quantity.	Value.
Cement	250,000 bbls.	$375,000
Granite	70 cu. ft.	49
Macadam	26,300 tons	17,725
Mineral Water	10,000 gals.	4,000
Paving Blocks	100 M	3,500
Quicksilver	100 flasks	4,100
Rubble	16,000 tons	240
		$404,614

SONOMA COUNTY.		
Brick	160 M	$1,440
Macadam	13,700 tons	9,864
Mineral Paint	800 tons	320
Mineral Water	10,000 gals.	4,000
Paving Blocks	3,879 M	80,492
Quicksilver	2,404 flasks	98,676
Rubble	577 tons	577
		$195,369

STANISLAUS COUNTY.		
Copper	116,000 lbs.	$15,080
Gold	----------	52,869
Mineral Paint	1,370 tons	2,400
Silver	----------	256
		$70,605

TEHAMA COUNTY.	Quantity.	Value.
Brick	600 M	$4,500
Mineral Water	5,000 gals.	2,500
		$7,000

TRINITY COUNTY.		
Gold	----------	$607,728
Granite	100 cu. ft.	75
Platinum	----------	200
Quicksilver	266 flasks	11,156
Silver	----------	2,085
		$621,244

TULARE COUNTY.		
Brick	1,500 M	$9,500
Chrysoprase	--------	500
Gold	--------	9,215
Granite	3,000 cu. ft.	2,260
Magnesite	1,300 tons	19,600
Rubble	100 tons	100
		$41,175

COUNTY MINERAL PRODUCTS AND VALUE—1903.

TUOLUMNE COUNTY.	Quantity.	Value.
Gold	---	$1,732,572
Granite	10,367 cu. ft.	14,020
Lime	1,600 bbls.	1,600
Marble	11,550 cu. ft.	28,875
Silver	---	13,989
		$1,791,056
VENTURA COUNTY.		
Asphalt	1,114 tons	$13,368
Borax	3,500 tons	140,000
Brick	1,380 M	12,900
Gold	---	1,087
Macadam	8,400 tons	2,100
Mica	50 tons	3,800
Petroleum	542,902 bbls.	517,611
Rubble	45,000 tons	23,000
Sandstone	1,750 cu. ft.	900
		$714,766

YOLO COUNTY.	Quantity.	Value.
Sandstone	280 cu. ft.	$144
YUBA COUNTY.		
Gold	---	$125,830
Silver	---	41
		$125,871
UNAPPORTIONED.		
Asphalt	357 tons	$4,284
Bituminous Rock	87 tons	196
Coal	93,026 tons	265,383
Copper	84,000 lbs.	10,920
Slate	10,000 squares	70,000
Soda	18,000 tons	27,000
		$377,783

As far as number of substances produced in each of the different counties is concerned, it may be stated that in 1903, Los Angeles County shows a production of 16 different substances; San Bernardino, 14; Riverside, 12; Placer, 11; Kern, Santa Barbara, and Shasta, 10 each; Santa Clara and Ventura, 9 each; Fresno, Monterey, San Diego, and San Luis Obispo, 8 each; Butte, Inyo, Sacramento, Solano, and Sonoma, 7 each; Alameda, Madera, and Tulare, 6 each; Amador, Mono, Napa, Santa Cruz, Trinity, and Tuolumne, 5 each; Calaveras, Colusa, Contra Costa, Nevada, Plumas, and Stanislaus, 4 each; Humboldt, Marin, Mariposa, Orange, San Benito, San Francisco, San Mateo, and Siskiyou, 3 each; Alpine, El Dorado, Lake, Lassen, Mendocino, San Joaquin, Sierra, Tehama, and Yuba, 2 each; Del Norte, Kings, Merced, and Yolo, 1 each.

BULLETIN No. 34

OF THE

CALIFORNIA STATE MINING BUREAU.

FERRY BUILDING, SAN FRANCISCO

LEWIS E AUBURY, State Mineralogist.

Showing the Mineral Production of California for Seventeen Years.

PRODUCTS	1887.		1888		1889		1890.		1891.		1892.		1893		1894.		1895.		1896.		1897.		1898.		1899		1900		1901.		1902.		1903		Total for 17 Years.		PRODUCTS.
	QUANTITY	VALUE.	QUANTITY	VALUE.	QUANTITY	VALUE.	QUANTITY	VALUE.	QUANTITY	VALUE.	QUANTITY	VALUE.	QUANTITY	VALUE.	QUANTITY	VALUE.	QUANTITY	VALUE.	QUANTITY	VALUE.	QUANTITY	VALUE.	QUANTITY	VALUE.	QUANTITY	VALUE.	QUANTITY	VALUE.	QUANTITY	VALUE.	QUANTITY	VALUE.	QUANTITY	VALUE.	QUANTITY	VALUE.	
Antimony ... tons	75	$15,000	100	$60,000									80	$24,000	100	$30,000	60	$18,000	17	$5,100	60	$18,000	80	$24,000	75	$45,000	70	$35,350	80	$36,000					693	$ 277,450	Antimony tons.
Asbestos ... tons	50	1,500	60	1,800	80	4,000	71	64,000	60	$3,000	80	$4,000	80	$4,000	50	$2,500	25	1,000							60	3,000	50	1,200	115	6,900					925	37,200	Asbestos tons.
Asphaltum ... tons	4,000	14,000	3,100	26,350	2,000	20,000	3,000	60,000	4,000	80,000	7,000	70,000	9,100	191,100	11,000	330,000	22,000	660,000	20,000	600,000	20,000	600,000	18,000	630,000	23,000	920,000	17,000	748,000	20,000	1,000,000	21,000	1,050,000	264,000	9,240,000	264,000	9,240,000	Asphaltum tons.
Bituminous Rock ... tons	64,000	160,000	60,000	150,000	30,000	120,000	60,000	180,000	100,000	300,000	70,000	210,000	60,000	180,000	53,000	159,000	50,000	150,000	55,000	165,000	60,000	180,000	70,000	210,000	80,000	240,000	71,000	213,000	90,000	270,000	55,000	165,000	45,000	$ 1,944,000	54,000	$ 1,944,000	Bituminous Rock tons.
Borax ... lbs.	2,000,000	110,000	3,000,000	180,000	1,000,000	120,000	2,000,000	200,000	3,000,000	300,000	11,000,000	880,000	7,000,000	560,000	15,000,000	1,200,000	13,000,000	1,040,000	13,000,000	1,040,000	14,000,000	1,120,000	15,000,000	1,200,000	20,000,000	1,600,000	16,000,000	1,280,000	25,000,000	2,000,000	30,000,000	2,400,000	30,000,000	2,400,000	264,000,000	19,360,000	Borax lbs.
Copper ... tons																																					Copper tons.
Chromite ... tons	2,000	60,000	1,000	35,000	2,000	50,000	3,000	70,000	1,000	30,000	1,000	30,000	2,000	60,000	3,000	90,000	2,000	60,000	2,000	60,000	3,000	90,000	2,000	60,000	2,000	60,000	1,000	30,000	1,000	30,000	1,000	30,000	1,000	30,000	29,000	870,000	Chromite tons.
Chrysoprase ... lbs.																																			60	300	Chrysoprase lbs.
Clay—Brick ... M																																			300	1,200	Clay—Brick M
Clay—Pottery ... tons	75,000	37,500	75,000	37,500	75,000	37,500	100,000	50,000	100,000	50,000	100,000	50,000	100,000	50,000	50,000	37,500	50,000	37,500	50,000	37,500	50,000	37,500	50,000	37,500	50,000	37,500	50,000	37,500	50,000	37,500	50,000	37,500	50,000	37,500	1,000,000	750,000	Clay—Pottery tons.
Coal ... tons	50,000	150,000	60,000	180,000	150,000	600,000	150,000	600,000	200,000	800,000	200,000	800,000	200,000	800,000	200,000	800,000	200,000	800,000	200,000	800,000	200,000	800,000	200,000	800,000	200,000	800,000	200,000	800,000	200,000	800,000	200,000	800,000	200,000	800,000	3,000,000	12,000,000	Coal tons.
Copper ... lbs.	1,000,000	100,000	1,000,000	120,000	10,000	1,200	2,000,000	240,000	2,000,000	240,000	2,000,000	240,000	2,000,000	240,000	2,000,000	240,000	2,000,000	240,000	2,000,000	240,000	2,000,000	240,000	2,000,000	240,000	2,000,000	240,000	2,000,000	240,000	2,000,000	240,000	2,000,000	240,000	2,000,000	240,000	34,010,000	4,081,200	Copper lbs.
Fuller's Earth ... tons																																					Fuller's Earth tons.
Gold ...		15,000,000		18,750,000		11,250,000		12,000,000		14,750,000		15,000,000		15,000,000		13,625,000		15,000,000		14,250,000		14,250,000		13,500,000		14,000,000		14,000,000		13,000,000		13,000,000		14,000,000		247,375,000	Gold.
Granite ... cu. ft.		500,000		67,000		1,250,000		1,300,000		1,300,000		1,300,000		1,300,000		981,250		1,000,000		1,000,000		1,000,000		1,000,000		1,000,000		1,000,000		1,000,000		1,000,000		1,000,000		16,147,250	Granite cu. ft.
Graphite ... tons																																					Graphite tons.
Gypsum ... tons	2,000	27,000	3,000	30,000	3,000	30,000	4,000	32,000	3,000	30,000	2,000	20,000	1,000	10,000	2,000	20,000	4,000	40,000	3,000	30,000	1,000	10,000	2,000	20,000	2,000	20,000	3,000	30,000	2,000	20,000	2,000	20,000	2,000	20,000	41,000	461,000	Gypsum tons.
Industrial Earth ... tons																																					Industrial Earth tons.
Iron Ore ... tons																																					Iron Ore tons.
Lead ... tons	500	60,000	500	70,000	500	60,000	500	60,000	500	60,000	500	60,000	500	60,000	500	60,000	500	60,000	500	60,000	500	60,000	500	60,000	500	60,000	500	60,000	500	60,000	500	60,000	500	60,000	8,500	1,020,000	Lead tons.
Lime and Limestone ... tons		850,750		600,000		810,000		600,000		600,000		800,000		600,000		600,000		600,000		600,000		600,000		600,000		600,000		600,000		600,000		600,000		600,000		12,050,750	Lime and Limestone tons.
Lithia Water ... tons																																					Lithia Water tons.
Manganese ... tons																																					Manganese tons.
Magnesite ... tons	500	9,000	400	6,000	500	9,000	600	9,000	1,000	15,000	1,000	15,000	1,000	15,000	1,000	15,000	1,000	15,000	1,000	15,000	1,000	15,000	1,000	15,000	1,000	15,000	1,000	15,000	1,000	15,000	1,000	15,000	1,000	15,000	17,500	262,500	Magnesite tons.
Manganese ... tons	1,000	9,000	1,000	10,000	500	5,000	600	6,000	1,000	10,000	800	8,000	600	6,000	1,000	10,000	1,000	10,000	1,000	10,000	1,000	10,000	1,000	10,000	1,000	10,000	1,000	10,000	1,000	10,000	1,000	10,000	1,000	10,000	16,900	169,000	Manganese tons.
Marble ... cu. ft.		5,000		5,000		67,000		80,000		100,000		140,000		80,000		60,000		80,000		70,000		60,000		70,000		80,000		60,000		80,000		70,000		80,000	1,000,000	1,000,000	Marble cu. ft.
Mica ... tons																																			60	2,000	Mica tons.
Mineral Paint ... tons					60	600	60	600	60	600	70	700	60	600	70	700	60	600	60	600	60	600	60	600	60	600	60	600	60	600	60	600	60	600	60	600	1,000	10,000	Mineral Paint tons.
Mineral Water ... gals.	60,000	180,000	1,000,000	300,000	600,000	180,000	600,000	180,000	600,000	180,000	600,000	180,000	600,000	180,000	600,000	180,000	600,000	180,000	600,000	180,000	600,000	180,000	600,000	180,000	600,000	180,000	600,000	180,000	600,000	180,000	600,000	180,000	600,000	180,000	10,200,000	3,060,000	Mineral Water gals.
Natural Gas ... cu. ft.																																					Natural Gas cu. ft.
Onyx and Travertine ...																																					Onyx and Travertine
Paving Blocks ... M																																					Paving Blocks M
Petroleum ... tons	670,000	2,337,300	800,000	1,200,000	900,000	900,000	977,000	684,000	950,000	665,000	900,000	630,000	870,000	609,000	750,000	1,200,000	1,000,000	1,600,000	1,000,000	1,600,000	1,200,000	1,920,000	1,300,000	2,080,000	1,500,000	2,400,000	2,000,000	3,200,000	2,500,000	4,000,000	3,000,000	4,800,000	3,000,000	4,800,000	19,000,000	30,400,000	34,347,300	7,214,400	Petroleum tons.
Platinum ... oz.	100	800	300	2,000	300	2,000	300	2,000	300	2,000	60	300	75	375	100	500	100	500	100	500	100	500	100	500	100	500	100	500	100	500	100	500	100	500	1,935	9,675	Platinum oz.
Pyrites ... tons																																					Pyrites tons.
Quartz Crystals ... lbs.																																					Quartz Crystals lbs.
Quicksilver ... flasks	31,700	1,140,000	28,000	1,120,000	25,000	1,000,000	23,000	1,000,000	20,000	1,000,000	20,000	1,000,000	20,000	1,000,000	20,000	1,000,000	20,000	1,000,000	20,000	1,000,000	20,000	1,000,000	20,000	1,000,000	20,000	1,000,000	20,000	1,000,000	20,000	1,000,000	20,000	1,000,000	20,000	1,000,000	363,700	18,260,000	Quicksilver flasks
Rubble ... tons																																					Rubble tons.
Salt ... tons	30,000	150,000	30,000	90,000	30,000	90,000	30,000	90,000	30,000	90,000	30,000	90,000	30,000	90,000	30,000	90,000	30,000	90,000	30,000	90,000	30,000	90,000	30,000	90,000	30,000	90,000	30,000	90,000	30,000	90,000	30,000	90,000	30,000	90,000	510,000	1,530,000	Salt ... tons
Sand—Glass ... tons																																					Sand—Glass tons
Sand—Quartz ... tons																																					Sand—Quartz tons
Sandstone ... cu. ft.		975,000		100,000		375,000		150,000		50,000		50,000		50,000		100,000		50,000		50,000		50,000		50,000		50,000		50,000		50,000		50,000		50,000		2,000,000	Sandstone cu. ft.
Serpentine ... cu. ft.																																					Serpentine cu. ft.
Silver ...		1,000,000		1,000,000		700,000		1,000,000		600,000																											Silver.
Soda ... crystals					5,000	75,000	5,000	60,000	5,000	60,000	5,000	75,000	4,000	60,000	5,000	75,000	5,000	75,000	5,000	75,000	5,000	75,000	5,000	75,000	5,000	75,000	5,000	75,000	5,000	75,000	5,000	75,000	5,000	75,000	85,000	1,275,000	Soda crystals
Soapstone ... tons																																					Soapstone tons.
Sulphur ... tons																																					Sulphur tons.
Tin ... lbs.																																					Tin lbs.
Turquoise ...																																					Turquoise
Tungsten ... lbs.																																					Tungsten lbs.
Totals ...		$ 1,7[illegible]		$ 1,[illegible]		$ 1,[illegible]		$ 1,[illegible]		$ 1,[illegible]		$ 1,[illegible]		$ 1,[illegible]		$ 1,[illegible]		$ 1,[illegible]		$ 1,[illegible]		$ 1,[illegible]		$ 1,[illegible]		$ 1,[illegible]		$ 1,[illegible]		$ 1,[illegible]		$ 1,[illegible]		$ 1,[illegible]		$ 1,[illegible]	Totals

SHOWING BY COUNTIES THE MINERAL PRODUCTIONS OF CALIFORNIA FOR THE YEAR 1903.

COMPILED FROM DIRECT RETURNS BY PRODUCERS.

COUNTIES	METALLIC.						NON-METALLIC.						HYDROCARBONS AND GASES.				STRUCTURAL MATERIALS.												TOTAL PRODUCT OF COUNTIES.		
	PRECIOUS METALS. (Coin and bullion as it left the mint or assayer.)		COPPER.		QUICKSILVER.		MISCELLANEOUS. (Including silver, lead, zinc, platinum, etc., as given in detail in the tables.)		MINERAL WATERS.		BORAX, SALT AND SODA.		ECONOMIC PRODUCTS. (Including asbestos, barite, bromine, calcium chloride, clays, feldspar, fluorspar, fuller's earth, gems, graphite, gypsum, infusorial earth, lime, magnesite, mica, monazite, pumice, rare earths, salt, soapstone, talc, tungsten, and zinc.)		ASPHALTUM, BITUMINOUS ROCK, AND NATURAL GAS.		PETROLEUM.		BRICK AND ORNAMENTAL TERRA COTTA.		HARDWOOD ORNAMENTAL TIMBER.		LIME AND LIMESTONE.				MACADAM.		BUILDING AND PAVING BLOCKS.		MISCELLANEOUS. (Serpentine, marble, sandstone, etc., as detailed in the tables.)		1903.	COUNTIES	1902.
	GOLD.	SILVER.	Lbs. Fine.	Value.	Flasks.	Value.	Quantity.	Value.	Gallons.	Value.	Tons.	Value.	Quantity.	Value.	Quantity.	Value.	Barrels.	Value.	Cubic Feet.	Value.	Lime. Tons.	Value.	Stone. Tons.	Value.	Tons.	Value.	Quantity.	Value.	Quantity.	Value.	Total Values.		Total Values.
Alameda	$2,701	$146									74,677	$443,953	(+) 31,317	$33,500																	$480,300	Alameda	$646,858
Alpine																															2,647	Alpine	14,179
Amador	1,009,746	4,536	10,000	$600																									Cu. ft. 8,074	Marble $3,279	1,558,319	Amador	1,479,112
Butte	1,571,807	526																													1,544,325	Butte	998,581
Calaveras	1,908,185	68,780	3,246,678	227,263				Platinum $210 Mineral Paints 1,000																	Tons 300	$1,500					3,270,529	Calaveras	2,571,018
Colusa					(1) 810	$21,708			170,000	$4,802	18	Salt $30																			420,458	Colusa	194,500
Contra Costa									78,000	19,500											144,828	$115,900									67,500	Contra Costa	58,141
Del Norte	7,152																														7,152	Del Norte	5,450
El Dorado	277,904																														294,304	El Dorado	351,373
Fresno	21,248	131							7,800	7,800					Tons 6,214	Asphaltum $730,672	(2) 5,000	$5,000	6,000	$12,000											849,928	Fresno	670,084
Humboldt	88,570																5,000	$5,000													99,818	Humboldt	79,953
Inyo	68,048	18,300	53,480	3,098				Platinum $29 Lead, 6,130			Borax 1,000 Salt 3,000	Borax 1,000 Salt 3,000			Tons 18,001,149	Asphaltum 600.70 Bit. Rock 60 Gypsum 1,000	3,600,330												129,163	Inyo	134,814
Kern	1,022,353	114,614	4,900	510				Lead, 83,000									5,000	30,000			101,661	76,246							Cu. ft. 30,000	Marble 30,000	1,857,803	Kern	2,481,963
Kings																	3,400	24,200													24,700	Kings	19,000
Lake					2,365	106,397			381,040	187,621																					294,018	Lake	788,231
Lassen	91,302	1,308							95,000	5,600	6,000	Salt 30,000			Tons 8,976	Gypsum $1,121	1,960,824	1,794,983	5,000 M Brick 200,000 Common 1,170 Brick 972	3,142	Hardwood 9,734 Cement 120,641	$20,900										97,305	Lassen	23,904
Los Angeles	6,674	23													Tons 22,308	Asphaltum 333,000													18,000	12,780	318,270	Tons Rubble 104,433	60 cu. ft. 170 tons 1,700 tons	Serpentine 600 Soapstone 1,000	1,049,525	Los Angeles	1,317,522
Madera	39,070	2	35,000	3,500					35,000	1,900							2,000 M	Brick 570,000 Common 172 Brick 972	125,641	Cement $20,900									4,000	1,000			218,427	Madera	121,181
Marin																	2,000 M	Brick 570,000 Common 172 Brick 972									600	900	Tons 149,116	Rubble 139,422	518,437	Marin	308,400
Mariposa	542,335	3,185	61,837	6,806					38,900	18,000							12,818	76,085													554,316	Mariposa	647,288
Mendocino																	552	6,450													20,500	Mendocino	9,200
Merced			6,000	720																	1,218	6,000									750	Merced	1,550
Mono	334,713	30,067	1,800	306				Lead, 26							Tons 61	Asphaltum 732													Tons 1,966 Rubble 6,000	Borates 867 Rubble 2,375	Tons 3,385	Glass Sand 6,967	380,354	Mono	39,252
Monterey	8,970								50,000	1,900					(4) 91	Magnesite $13															196,841	Napa	210,665
Napa					7,850	353,008			344,400	124,000																					2,668,244	Nevada	2,158,839
Nevada	2,456,047	9,360	2,500	365													1,556,104	1,013,383	5,000 M Brick 15,000 Common 15,000	3,170	Chestnut 6,180											1,279,435	Orange	974,712
Orange	180							Platinum 250							Granite 1,262														Tons 37,967	Rubble 13,118	400,880	Placer	1,019,497
Placer	620,871	1,118	4,000	330				Manganese 25											1,000 M Brick 15,000	108,078	131,661	1,600	6,000	4,000	9,000	2,000	3,750	Tons Rubble 7,000	Paving Blks 16,000 Rubble 16,000	Cu. ft. 17,000	Marble 1,940	634,954	Plumas	381,308
Plumas	424,313	510	1,800	252															1,000 M Brick 15,000	47,883	48,371	21,000	31,380	9,000	8,500	11,240	22,160	Tons Rubble 853				448,648	Riverside	234,672
Riverside	13,506	126																	10,000	120,000	70,471	2,223					57,418	17,225			546,796	Sacramento	454,128
Sacramento	325,343	334																									58,000	23,200			347,461	San Benito	325,231
San Benito					8,180	344,351			10,000	600											39,932	23,891	53,819	64,613	71,000	71,000	270 M Brick 810,000 Common Brick 270,000	Fire Brick 18,000 Rubble 18,000	Cu. ft. 38,000	Marble 61,620	1,510,618	San Bernardino	3,308,703
San Bernardino	381,187	59,199	60,400	7,550				Lime 14,000 Lead, 504			20,440	480,000	Tons 60	Lithia 8 cts. 17,000 Tourmaline 1,000					3,150	11,150	33,900	18,300					Tons 22,772	Rubble 42,987	542,810	San Diego	562,780
San Diego	661,346	1,944							6,000	3,000									22,422	194,236							52,900	33,480	456,010	473,010	902,786	San Francisco	894,100
San Francisco															Tons 6	Iod. Barite 60	M. Co. ft. 60,154 Bldg. Stone 3,363	Salmon Gas 64,209 Bldg. Stone 7,375													94,833	San Joaquin	70,668
San Joaquin																			740	6,000	6,000	Granite 4,000 Sandstone 1,000	100	100					Tons 21,188	Rubble 47,663	257,416	San Luis Obispo	200,291
San Luis Obispo	1,840				1,577	183,430													3,100	77,500	4,000								Tons 200,000	Rubble 150,000	352,300	San Mateo	130,749
San Mateo											1,700	Salt 33,000							4,800	44,800	53,364	Sandstone 34,540	30,000	30,000	30,000	60,000	Tons 1,840	Rubble 4,393	304,533	Santa Barbara	971,440
Santa Barbara									55,800	22,320					Tons 2,700	Iod. Earth 12,375	1 Cr. Lode 1 Placer 1 Asphalt 1 Bit. Rock 47	Asphalt, 123 Bit. Rock, 47 Bit. Coal, 5 Bit. Coal 45,180	383,226	146,640	38,098	164,134	119,350	Cement 725,000	7,000	7,000			Tons 152	Rubble 100	670,150	Santa Clara	971,122
Santa Clara					3,603	233,130			50,000	12,500							15,625	46,180	700	180	220,833	165,443	9,000	3,725	31,500	30,750					254,297	Santa Cruz	305,396
Santa Cruz															Tons 2,600	Pyrites 3,900															3,301,680	Shasta	3,730,749
Shasta	771,342	308,381	18,433,430	1,171,497				Chromite 3,250	40,000	12,000									1,000	17,500							27,000	10,800	3,600	3,900	3,000	1,800	811,298	Sierra	833,446
Sierra	310,770	476							150,000	50,000																					662,386	Siskiyou	1,094,766
Siskiyou	613,516	23							10,000	4,000																					404,314	Solano	170,140
Solano					100	4,100			10,000	4,000																					198,208	Sonoma	199,903
Sonoma					2,604	98,670	900	Mineral Paint 420																							70,608	Stanislaus	19,054
Stanislaus	52,889	166	118,000	10,090			1,370	Mineral Paints 3,400	9,000	2,600									900	1,800											7,000	Tehama	3,500
Tehama								Platinum 100													100	Granite 75									631,249	Trinity	731,561
Trinity	697,738	2,063			985	11,150													1,800	9,800	9,000	Granite 2,250					Tons 100	Rubble 100	41,175	Tulare	67,995
Tulare	9,315														Tons 1,500	Chromite Magnesite 1,500					10,367	Granite 14,000 Sandstone 1,000	1,800	1,800					Cu. ft. 11,650	Marble 23,275	1,791,056	Tuolumne	1,830,229
Tuolumne	1,732,571	13,788													Tons 2,300	Mica 2,300											3,400	3,100	45,000	Rubble 29,000	716,766	Ventura	462,886
Ventura	1,087								3,500	140,000	Borax 50	Salt 2,500	Tons 1,319	Asphaltum 13,205		$45,802	$17,411		1,000	13,900	1,750										194	Yolo	440
Yolo																					380	Sandstone 194									133,871	Yuba	155,833
Yuba	135,830	61									Coke from 257 tons 97,000	Coke 965,382	Asphalt, Lbs. 200 Bit. Rock 600																Pyrites 10,000	Mica 70,000	377,783	Unapportioned	73,619
Unapportioned (5)			84,000	10,920					13,000	97,500	93,078	965,382																					
Totals	$916,671,264	(6)$317,446	19,112,361	$2,233,987	33,094	$1,325,954		$11,300	1,273,340	$568,301		$480,766		$180,573		$633,300	34,440,539	$7,813,571		$3,068,180		$1,263,879	$96,567	$418,286	$20,915	$183,665	$95,185	$436,172		$1,272,081		$18,803	427,240,049	Totals	458,089,108
	Total value Gold and Silver, $18,988,708.		Total value Metallic Substances, inc. Gold and Silver, $20,456,966.				Total value Non-Metallic Substances, $2,048,625.						Total value Hydrocarbons and Gases, $7,943,571.				Total value Structural Materials, $6,309,463.														1903.		1902.

Value was of bullion produced. Spent values.
Containing lead, molybdenum oxide, and mineral production during 1903.
(3) This Borates was mined independently; and Salt Works (4) Of this quantity, 1,000 tons was sold for flux, the remainder for cement; 91 tons, value $13, was sold for flux. Production.
(5) Unapportioned.
(6) Value of 1,000 pounds of salt and, bread, would be $1,750,000
(7) Lime and Stone not included.
(8) Unapportioned.
(9) Value of blue metallurgical lead.
(10) Value of blue metallurgical lead.
(11) Bureau of 31 gallons. Prices, average 4 to 5 to lead.

(12) Includes cement, cement, and lime.
(13) Barite is used in [illegible] manufacture and paving.
(14) Of this quantity, 1,000 tons was sold for flux, the remainder as
(15) Unapportioned mineral products of mines in operation during 1903, but the returns for same as to amount and value could not be obtained in time for compilation in general tabulations; and the value of such products may be considered as known to be nearly, but [illegible] which no returns were obtained.

MISCELLANEOUS TOTALS—METALLIC.

Platinum	100 ounces	$2,000
Lead	141,000 lbs.	6,345
Manganese	1,000 tons	25,000
Mineral Paints	1,770 tons	35,400
Platinum	1,000 ounces	21,000
		$129,745

MISCELLANEOUS TOTALS—NON-METALLIC.

Coal	600 tons	$900
Lime	14,000 bbls.	7,000
Limestone	1,000 tons	750
Mineral Paints	1,370 tons	3,400
Platinum	100 ounces	2,000
		$14,050

MISCELLANEOUS TOTALS—HYDROCARBONS AND GASES.

Asphaltum	6,000 tons	$30,000
Bituminous Rock	31,440 tons	31,440
Natural Gas	33,000 M cu. ft.	33,000
		$94,440

MISCELLANEOUS TOTALS—STRUCTURAL MATERIAL.

Clays (sold)	3,770 tons	$7,540
Marble	2,000 cu. ft.	6,000
Mineral Paints	1,370 tons	3,400
Pottery (including Chemical)	1,000 tons	4,000
Serpentine	60 cu. ft.	300
Slate	3,000 cu. ft.	3,000
Soapstone	1,000 tons	4,000
		$31,240

TOTALS—PRODUCTS CRUDE AND CLASS FOR FARM, FACTORY ETC.

Metals (Precious and Base)	19,445 lbs.	$1,000,000
Mineral Products	427,240,049 tons	427,240,049
Clays for Pottery Works, etc.	3,770 tons	26,390
		$428,266,439

TOTALS—SUBSTANCES AND CLASSES.

Metallic	19,445,000 lbs.	$20,456,966
Non-Metallic	427,240,049 tons	427,240,049
Hydrocarbons and Gases	33,000 M cu. ft.	7,943,573
		$455,640,588

Printed at the State Printing Office, Sacramento. W. W. Shannon, Supt.

Relief Map of California...

BY

N. F. DRAKE

Department of Geology,
Stanford University

California Mines and Minerals

ISSUED BY THE

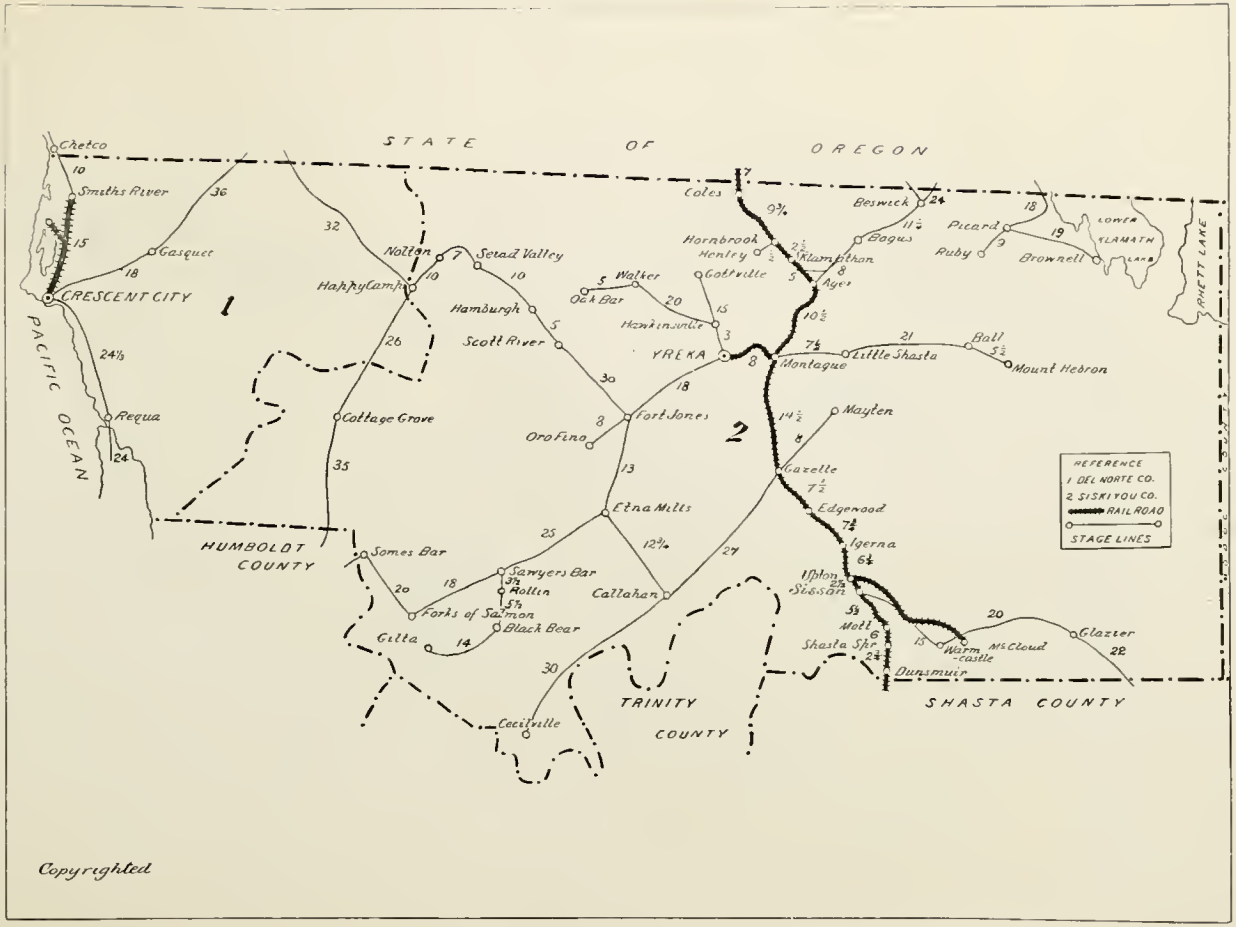
CALIFORNIA STATE MINING BUREAU

LEWIS E. AUBURY
State Mineralogist

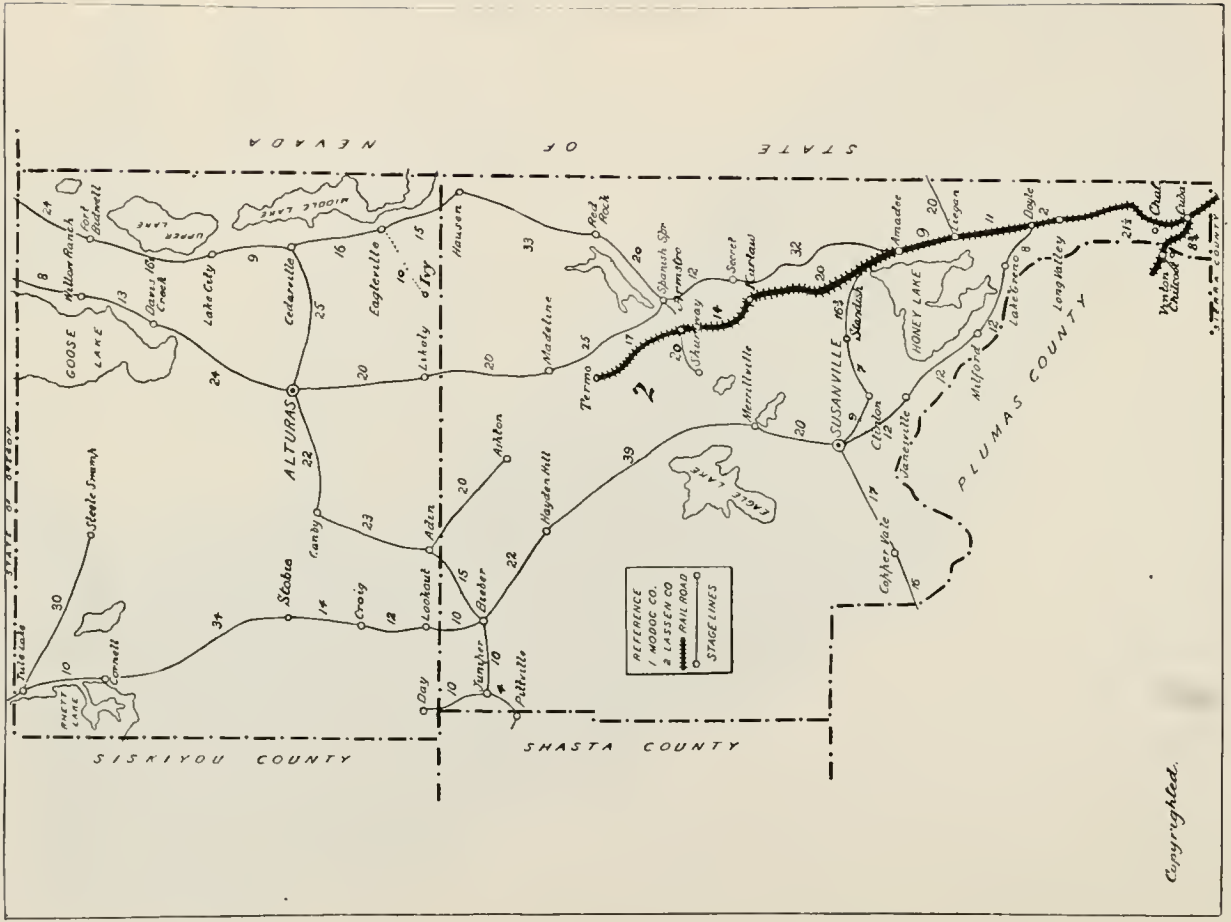
The County Maps.

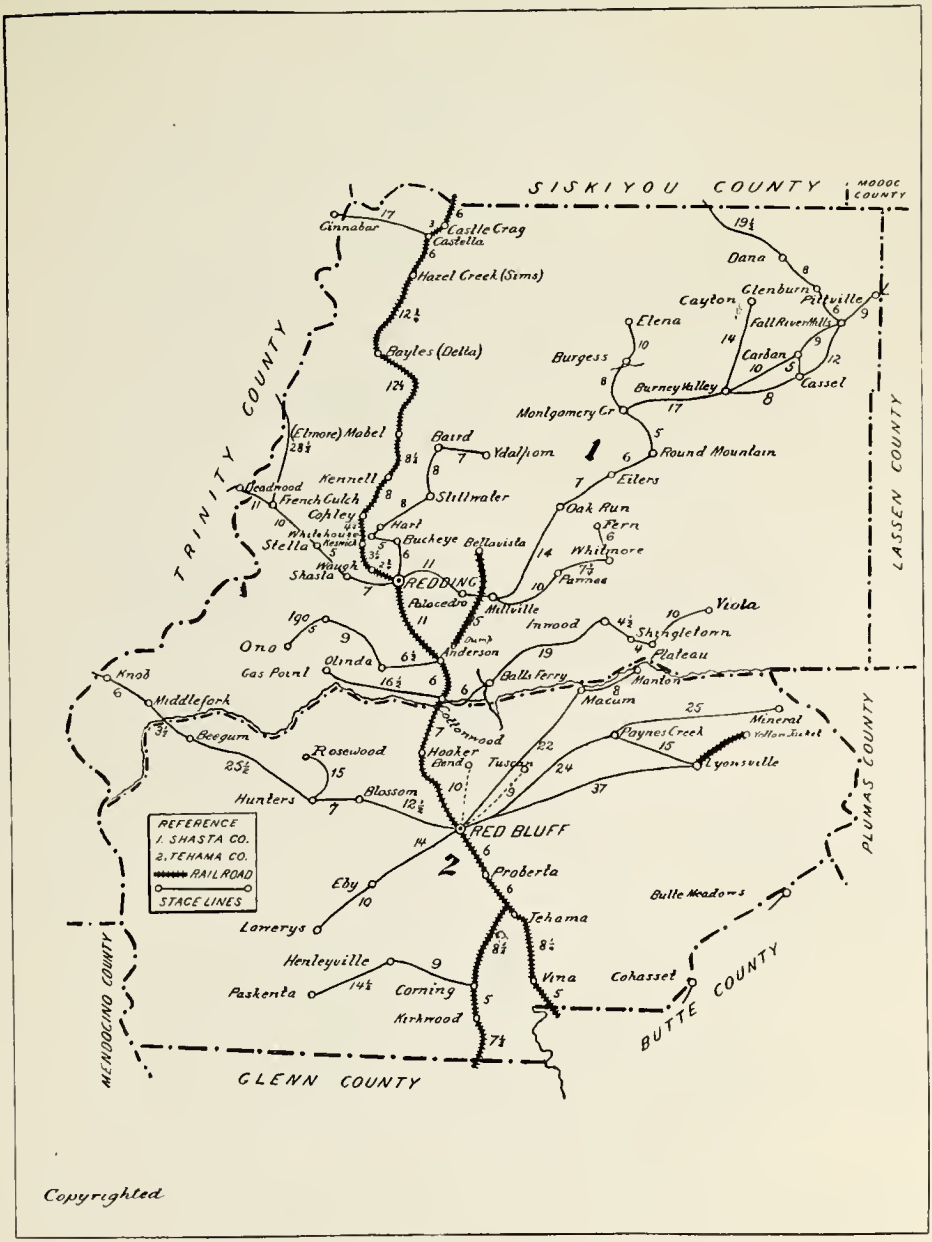
The County Maps in this pamphlet were drawn expressly for the Fireman's Fund Insurance Company of San Francisco, and are the work of Mr. Louis Weinmann, the secretary of the company. This company kindly loaned the original drawings of the maps to the California State Mining Bureau for making the plates of this little book. The maps are copyrighted and must not be reproduced without obtaining permission from the Fireman's Fund Insurance Company.

They show all towns, postoffices, railroads, county roads, stage lines carrying passengers, mail and express, and distances between points, forming a handy and useful guide, especially to all who wish to leave the railroad and penetrate to the interior of the mining districts.



MODOC AND LASSEN COUNTIES.





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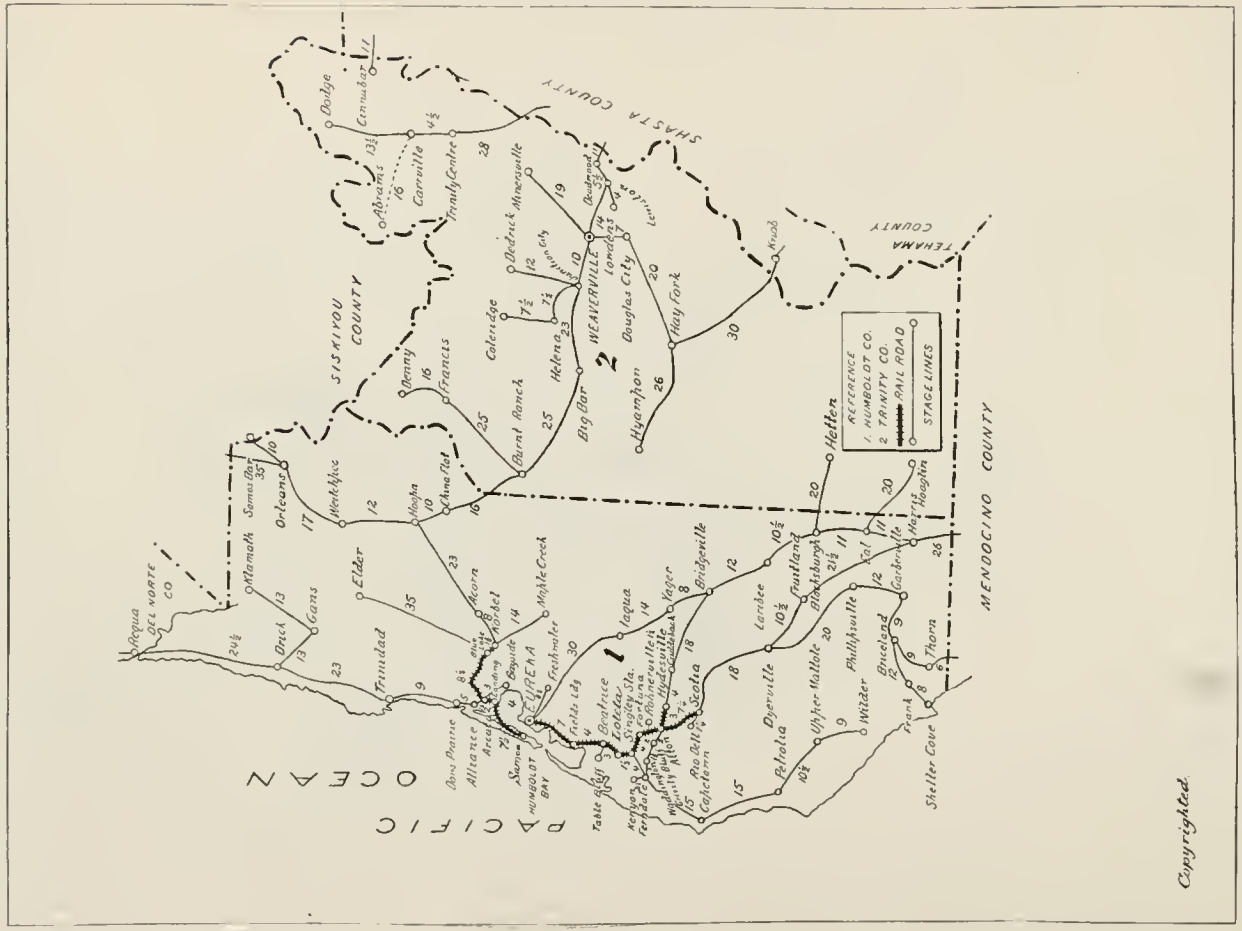
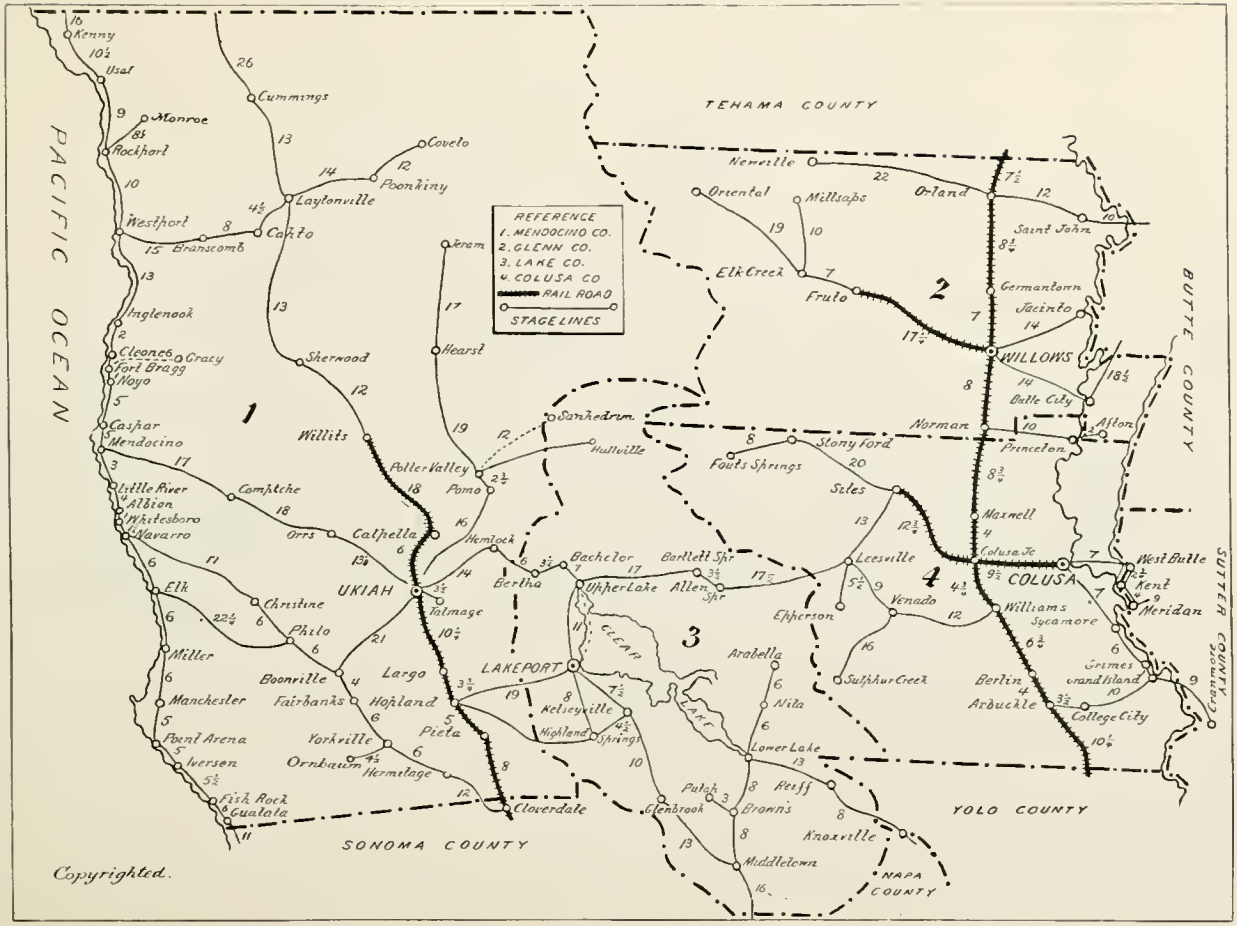
SHASTA AND TEHAMA COUNTIES.

HUMBOLDT AND TRINITY COUNTIES.



MENDOCINO, GLENN, LAKE, AND COLUSA COUNTIES.



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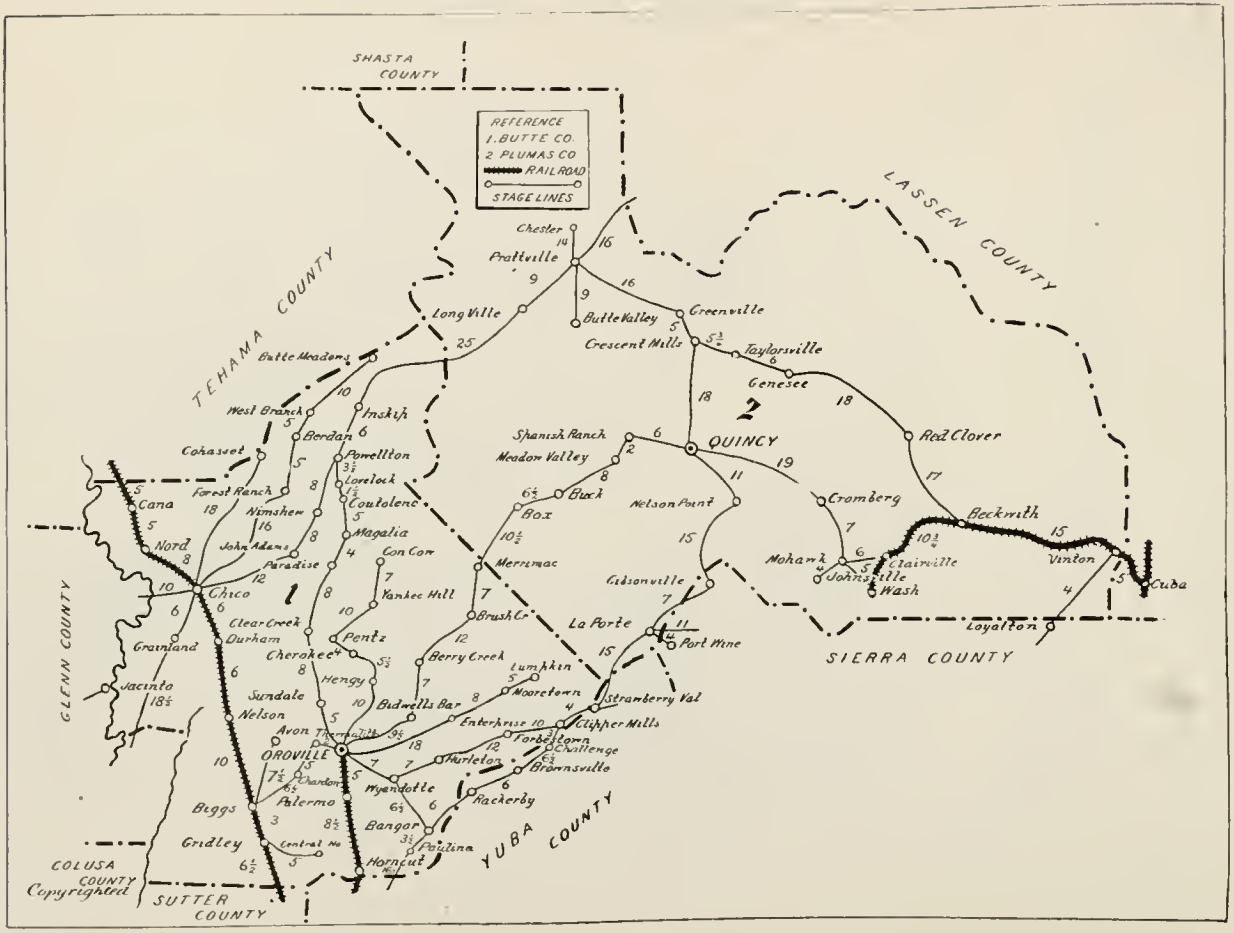

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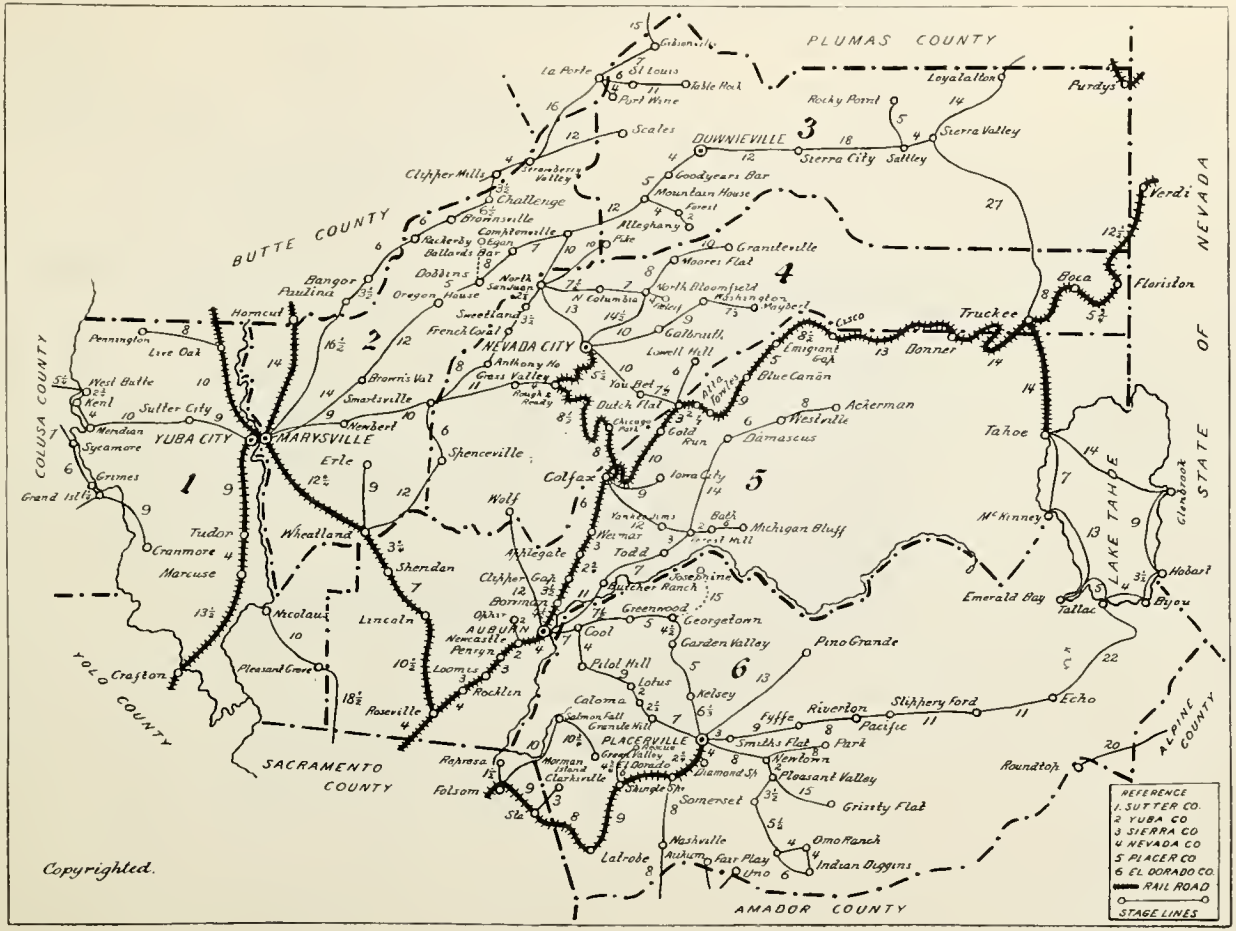
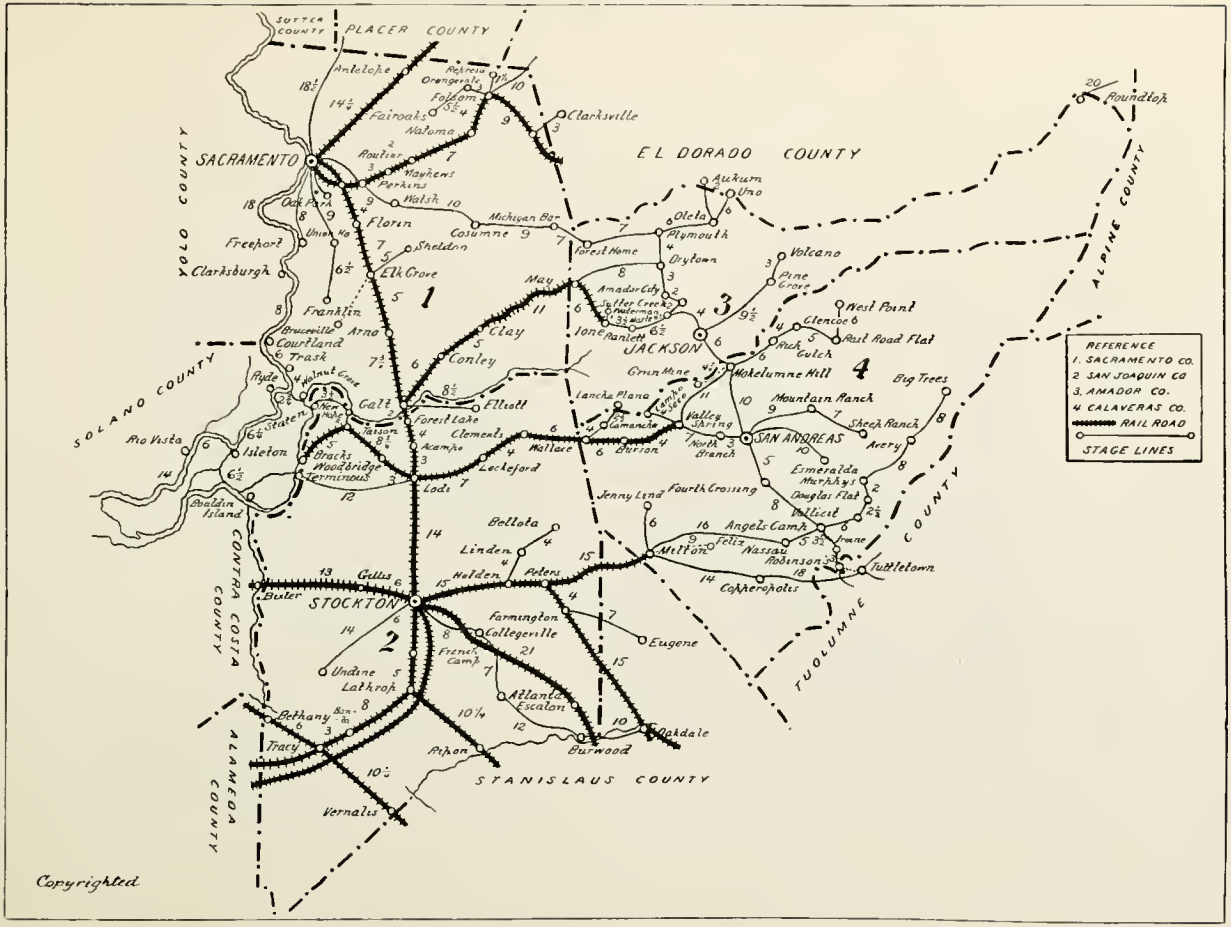
SUTTER, YUBA, SIERRA, NEVADA, PLACER, AND EL DORADO COUNTIES

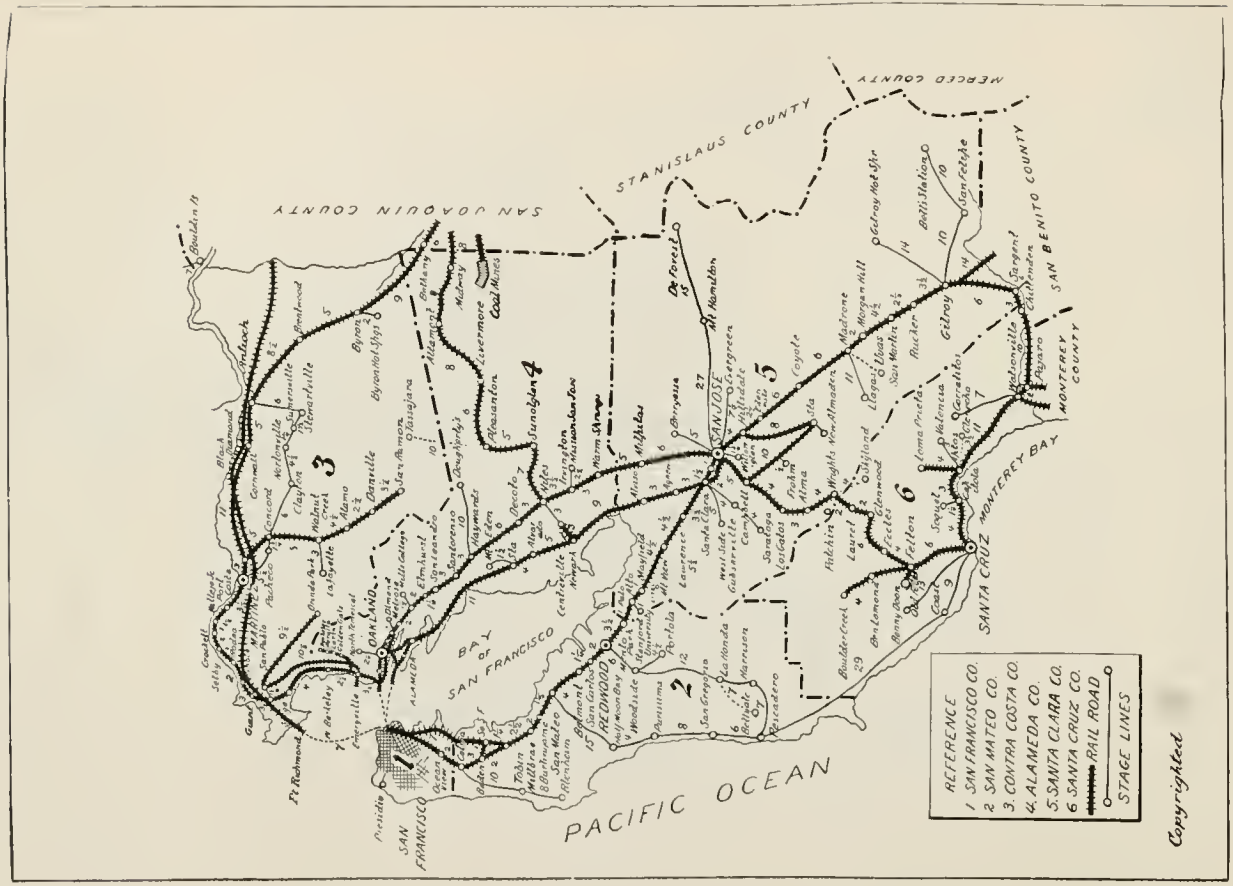


SONOMA, MARIN, NAPA, YOLO, AND SOLANO COUNTIES.

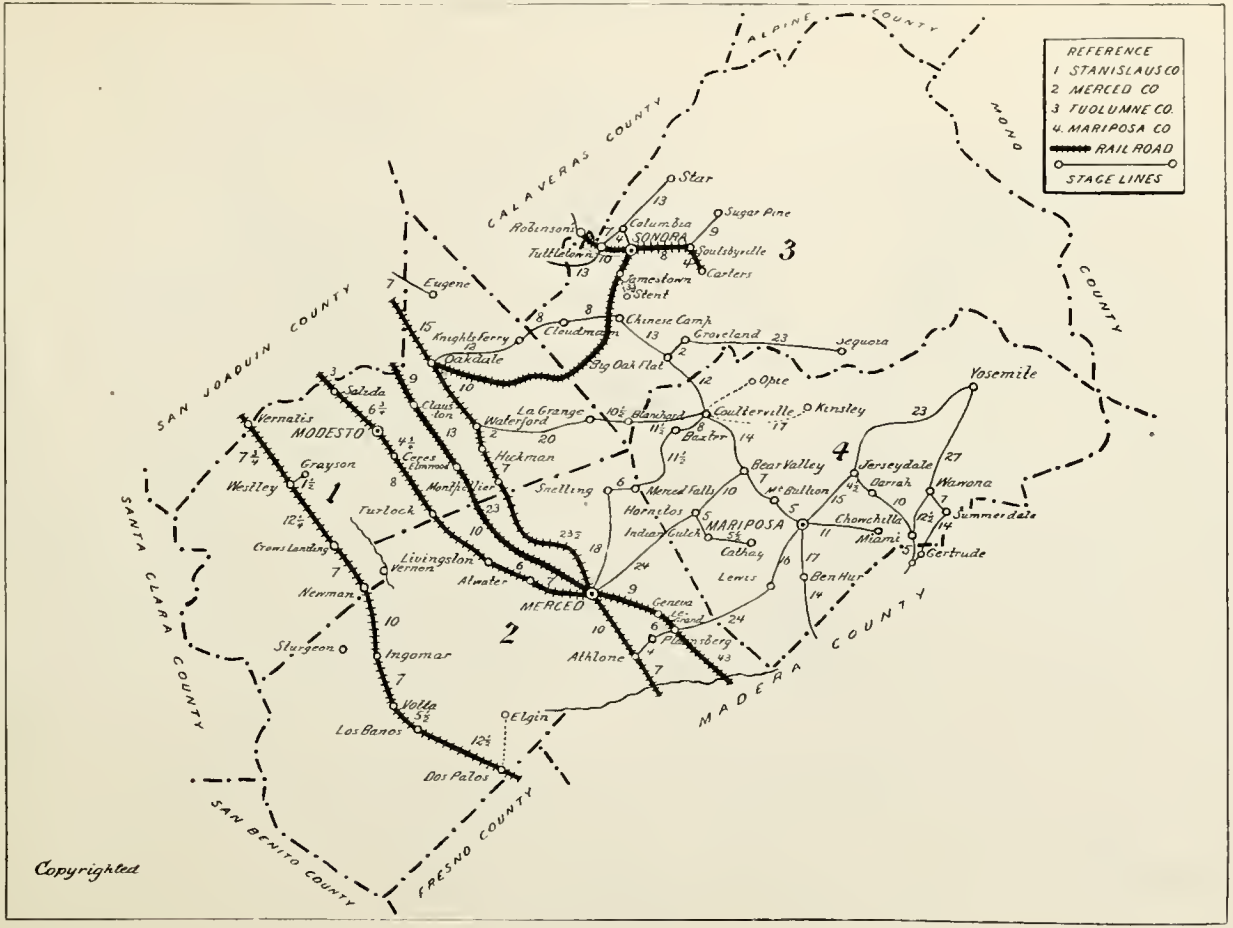
SACRAMENTO, SAN JOAQUIN, AMADOR, AND CALAVERAS COUNTIES.



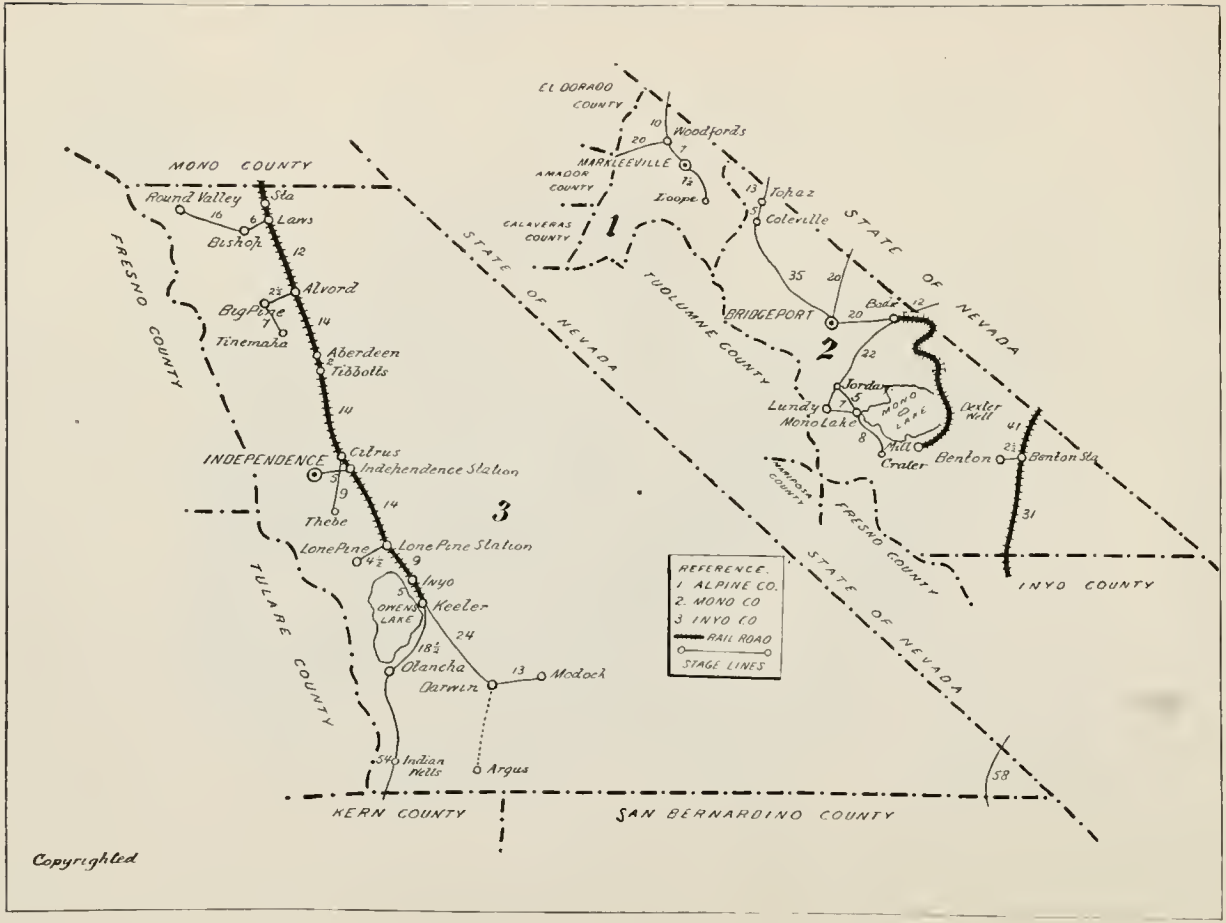
SAN FRANCISCO, SAN MATEO, CONTRA COSTA, ALAMEDA, SANTA CLARA, AND SANTA CRUZ COUNTIES.



STANISLAUS, MERCED, TUOLUMNE, AND MARIPOSA COUNTIES.

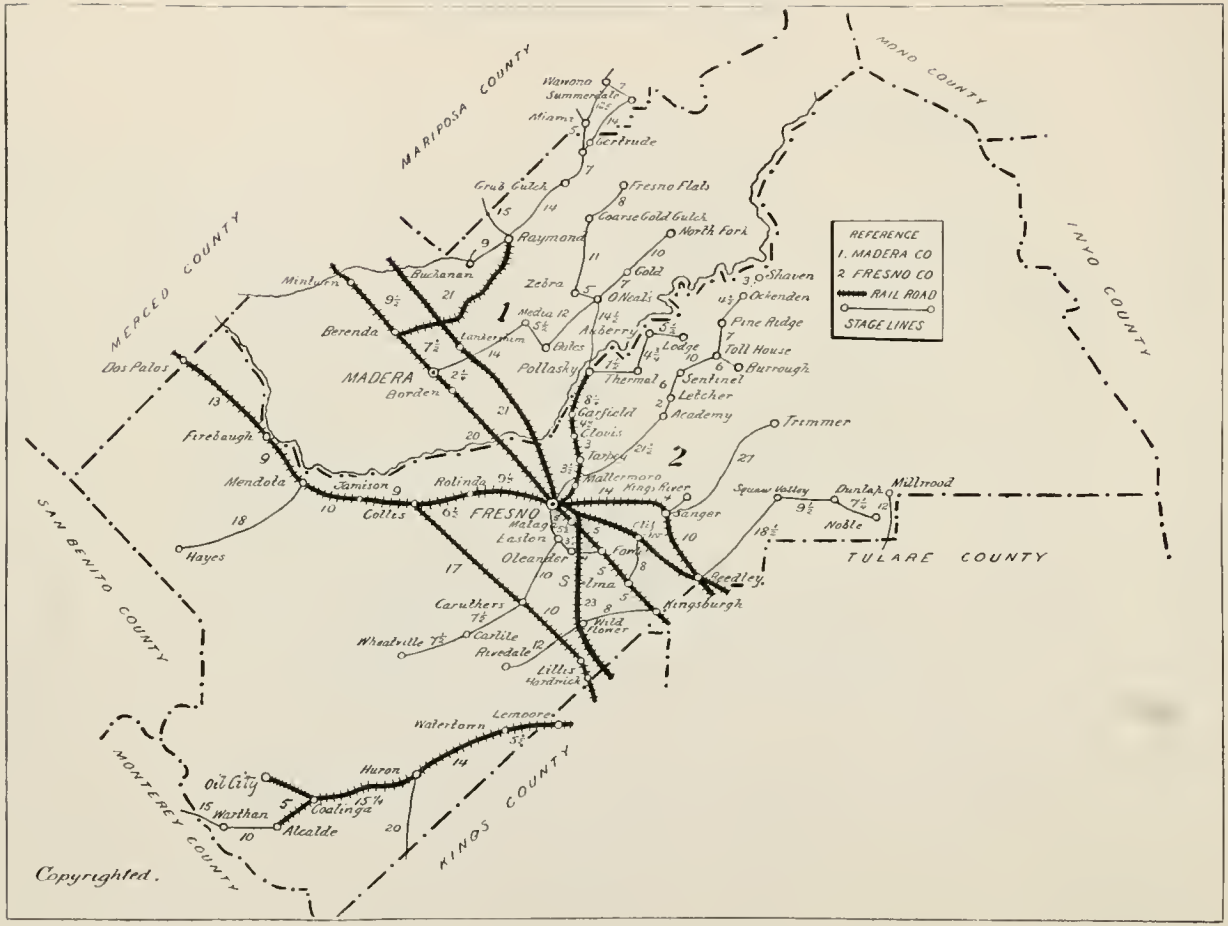


ALPINE, MONO, AND INYO COUNTIES.

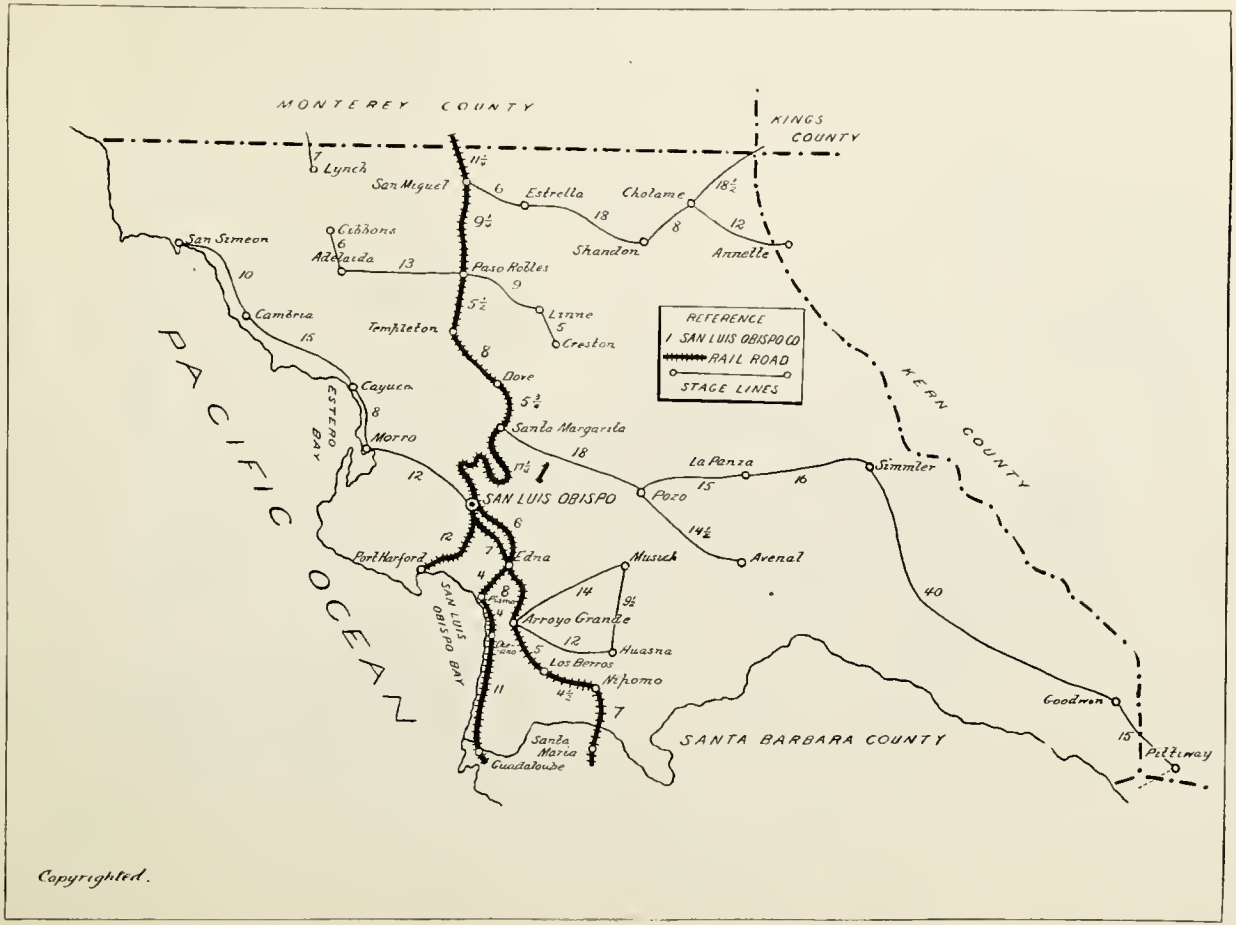


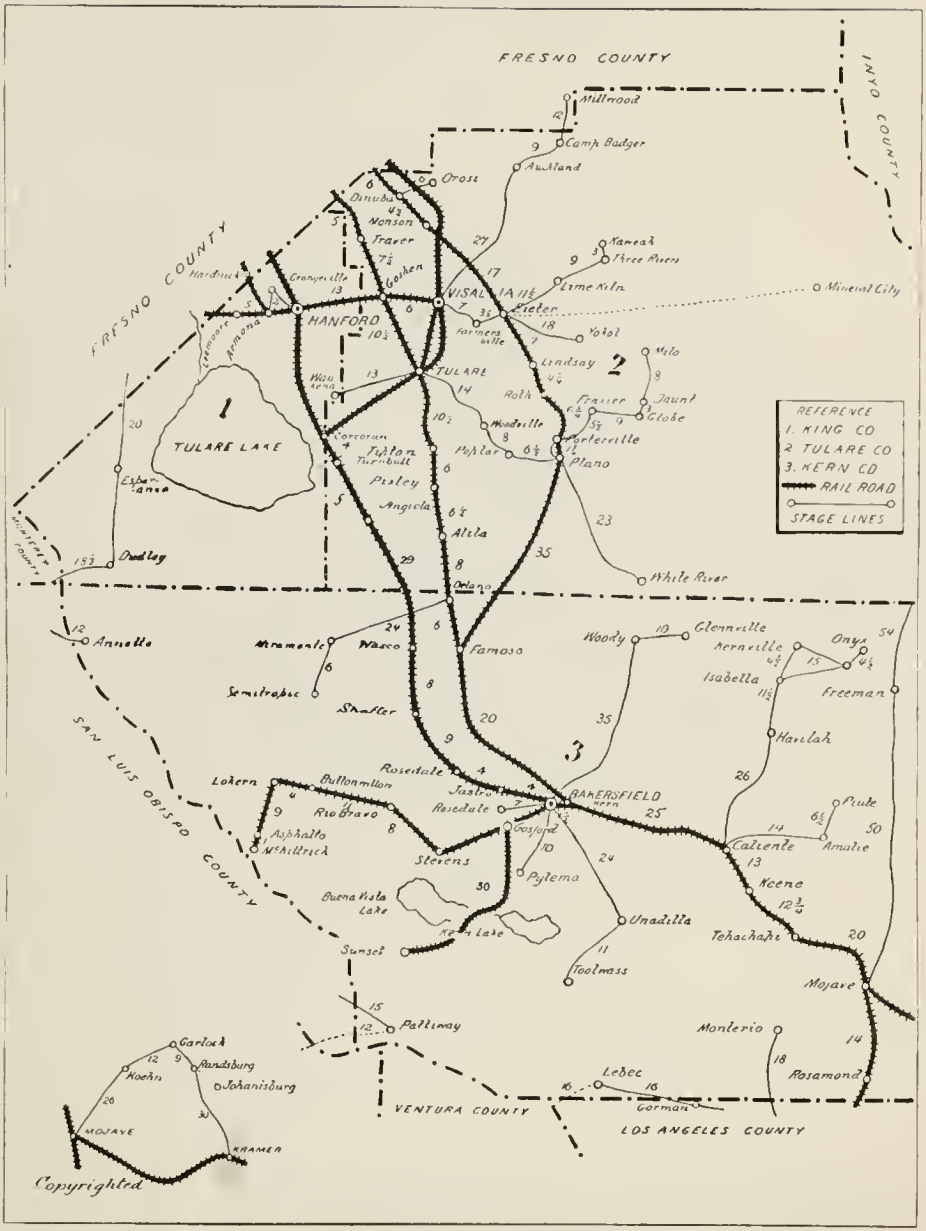
MONTEREY AND SAN BENITO COUNTIES.

MADERA AND FRESNO COUNTIES.



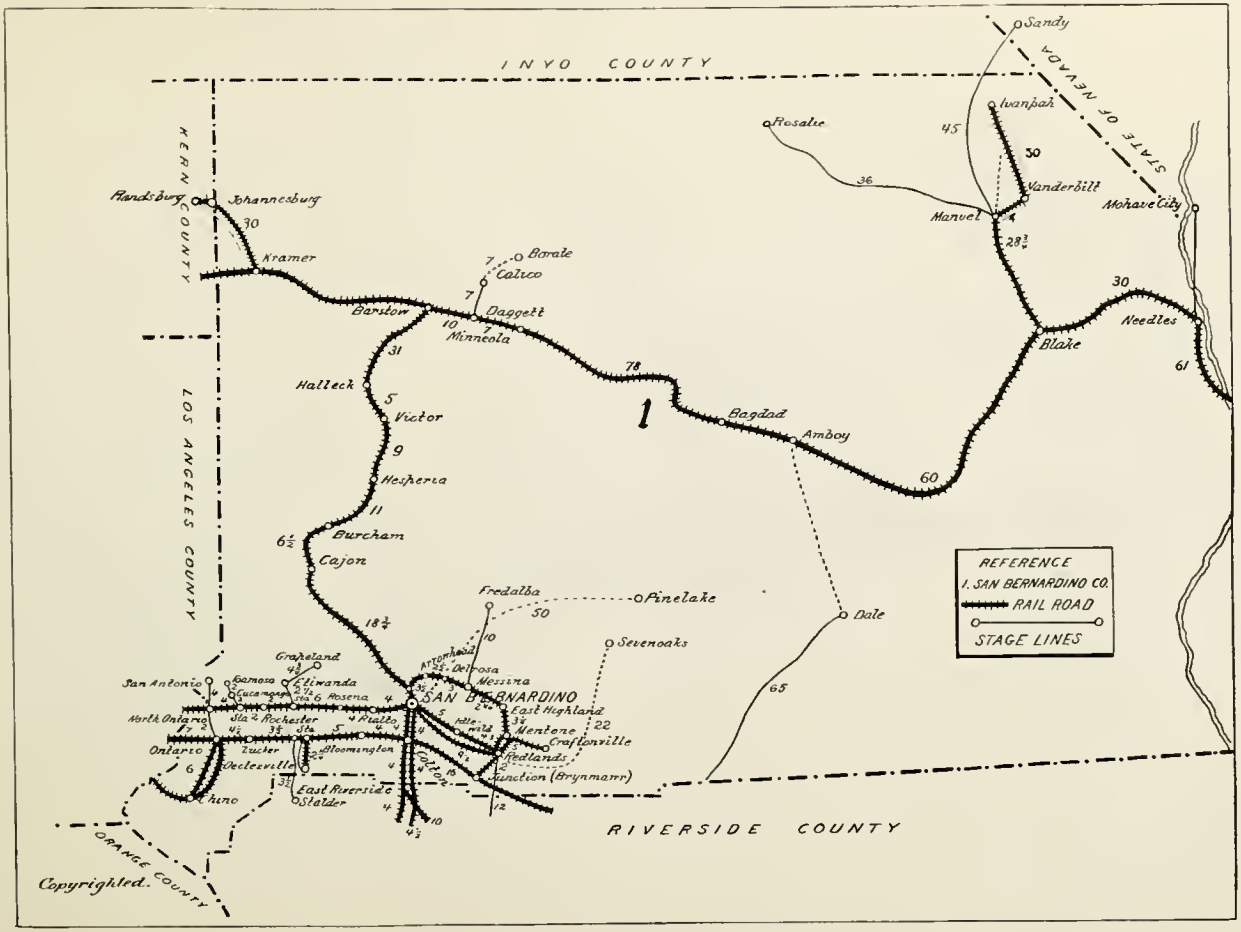
SAN LUIS OBISPO COUNTY.



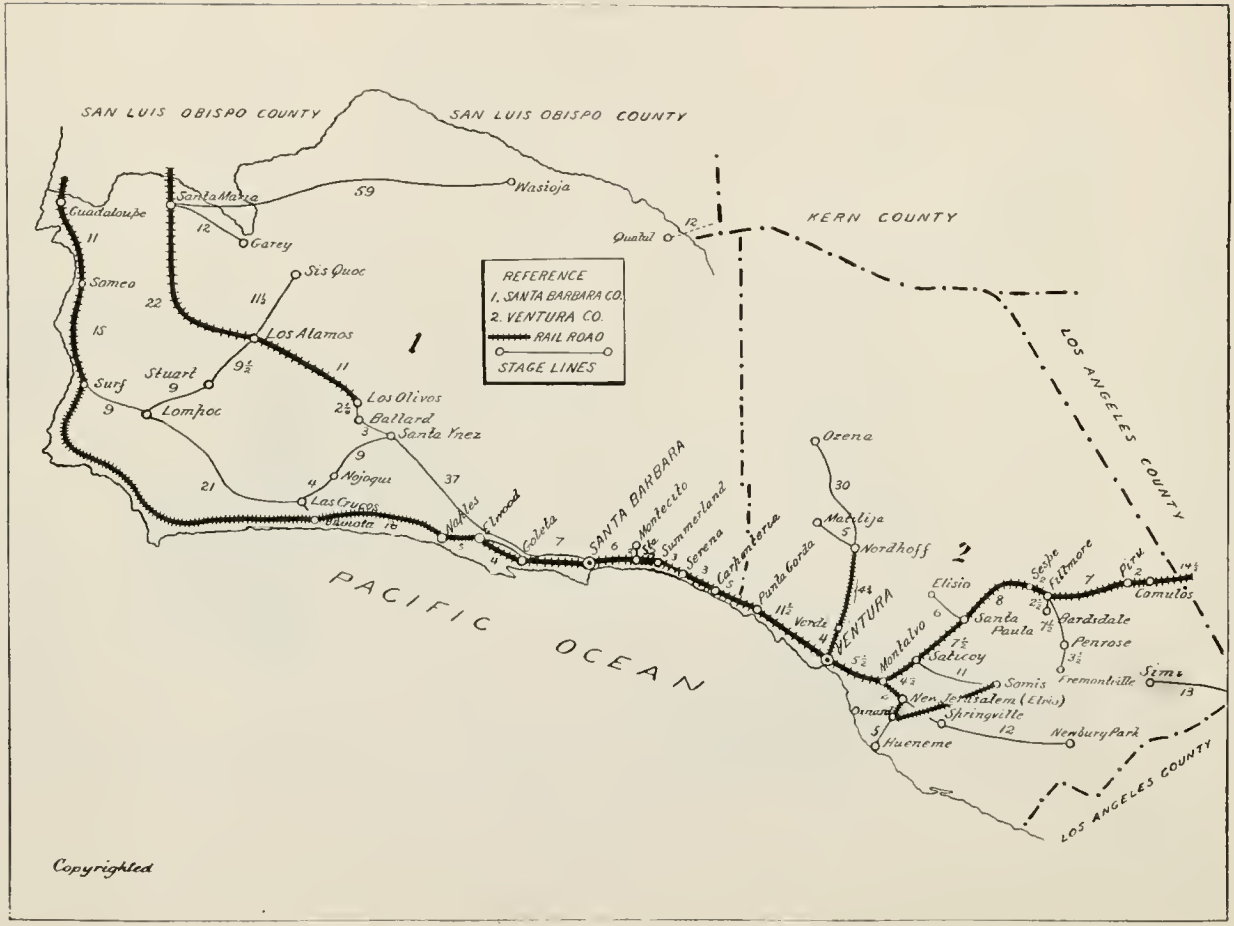


KINGS, TULARE, AND KERN COUNTIES.

SAN BERNARDINO COUNTY.



SANTA BARBARA AND VENTURA COUNTIES.



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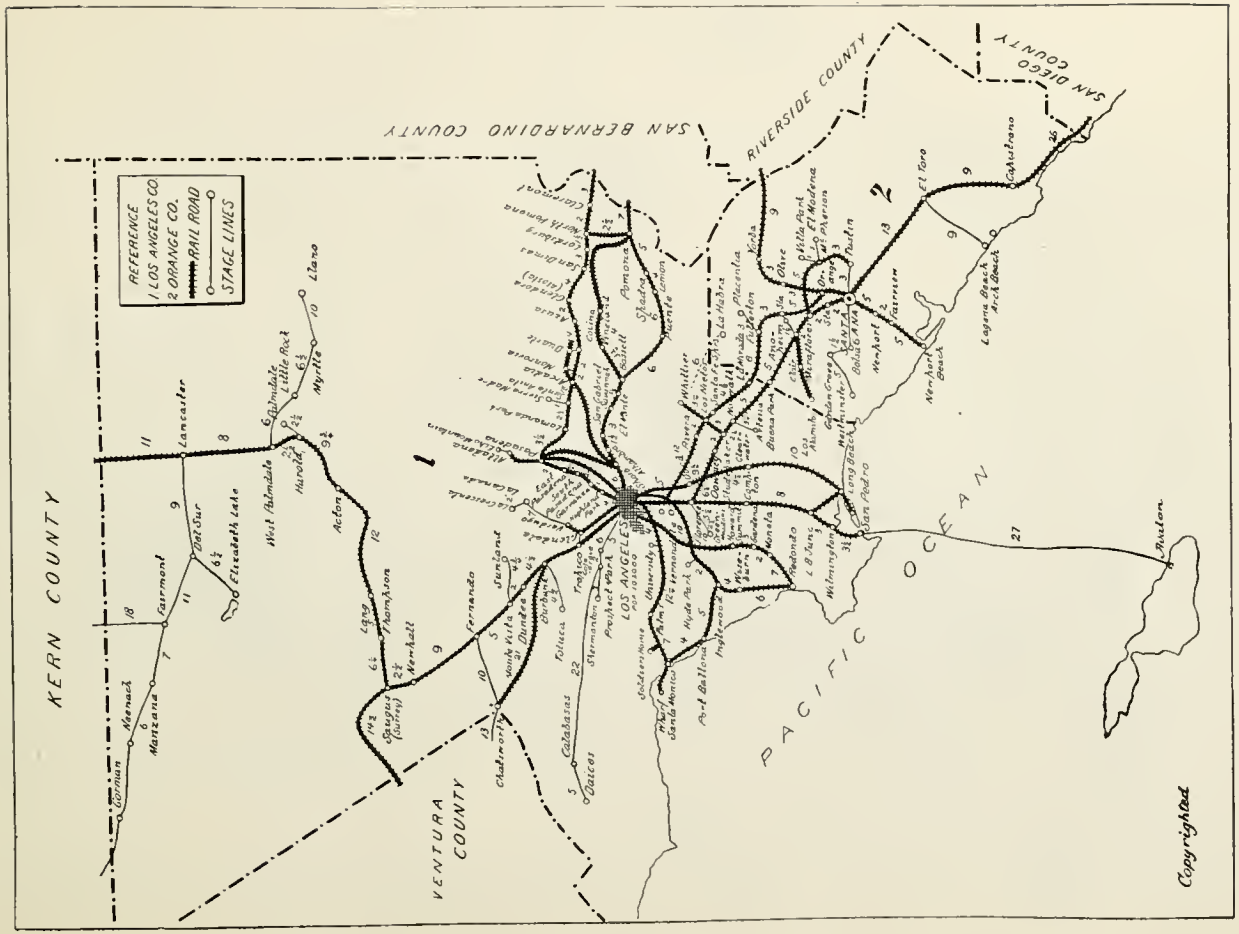
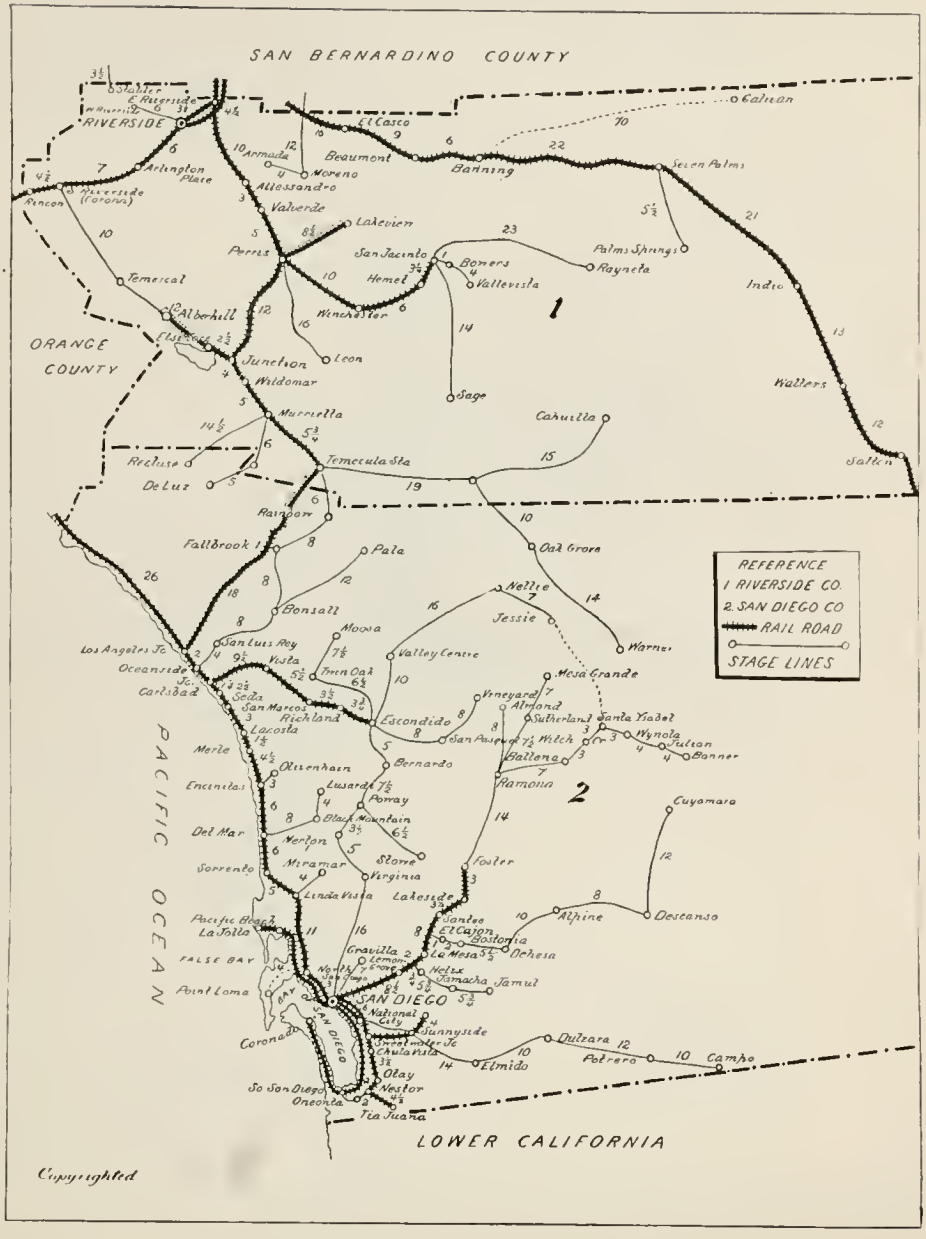
LOS ANGELES AND ORANGE COUNTIES.





RIVERSIDE AND SAN DIEGO COUNTIES.

LIST OF PUBLICATIONS OF THE CALIFORNIA STATE MINING BUREAU.

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Publications of this Bureau will be sent on receipt of the price and requisite amount of postage. Only stamps, coin, or money orders will be accepted in payment. *All publications not mentioned are exhausted.*

Under Section 8, amendment to the Mining Bureau Act, approved March 10, 1903, attention is respectfully called to that portion of the amendment which states: "The Board (Board of Trustees) is hereby empowered to fix a price upon, and to dispose of to the public, at such price, any and all publications of the Bureau, including reports, bulletins, maps, registers, etc. The sum derived from such disposition must be accounted for and used as a revolving printing and publishing fund for other reports, bulletins, maps, registers, etc. The prices fixed must approximate the actual cost of printing and issuing the respective reports, bulletins, maps, registers, etc., without reference to the cost of obtaining and preparing the information embraced therein."

	Price.	Postage.
Report XI—1892, First Biennial	$1.00	$0.15
Report XIII—1896, Third Biennial	1.00	.20
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Bulletin No. 6—"Gold Mill Practices in California" (3d ed.)	.50	.04
Bulletin No. 9—"Mine Drainage, Pumps, Etc.," Bound	.60	.08
Bulletin No. 15—"Map of Oil City Oil Fields, Fresno County, California"	.05	.02
Bulletin No 16—"Genesis of Petroleum and Asphaltum in California" (3d edition)	.30	.03
Bulletin No. 18—"Mother Lode Region in California"	.35	.06
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Map of Mother Lode	$0.05	.02
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Register of Mines, with map, Trinity County	.25	.08
Register of Mines, with map, Lake County	.25	.08
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Register of Mines, with map, Inyo County	.25	.08
Register of Mines, with map, Shasta County	.25	.08
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Register of Mines, with map, Mariposa County	.25	.08
Register of Mines, with map, Kern County	.25	.08
Register of Oil Wells, with map, Los Angeles City	.35	.02

IN PREPARATION.

Gems and Jewelers' Materials of California.
Structural and Industrial Materials of California.

Samples of any mineral found in the State may be sent to the Bureau for identification, and the same will be classified free of charge. It must be understood, however, that *no assays, or quantitative determinations, will be made.* Samples should be in lump form if possible, and marked plainly, on outside of package, with name of sender, postoffice address, etc., and a stamp should be inclosed for reply.

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